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Utah  
1909/10

COLLEGE BULLETINS.  
*Issued Quarterly.*

Vol. 9. No. 1  
*June, 1909*

CATALOGUE  
OF THE  
AGRICULTURAL COLLEGE  
OF UTAH  
FOR  
1909-1910

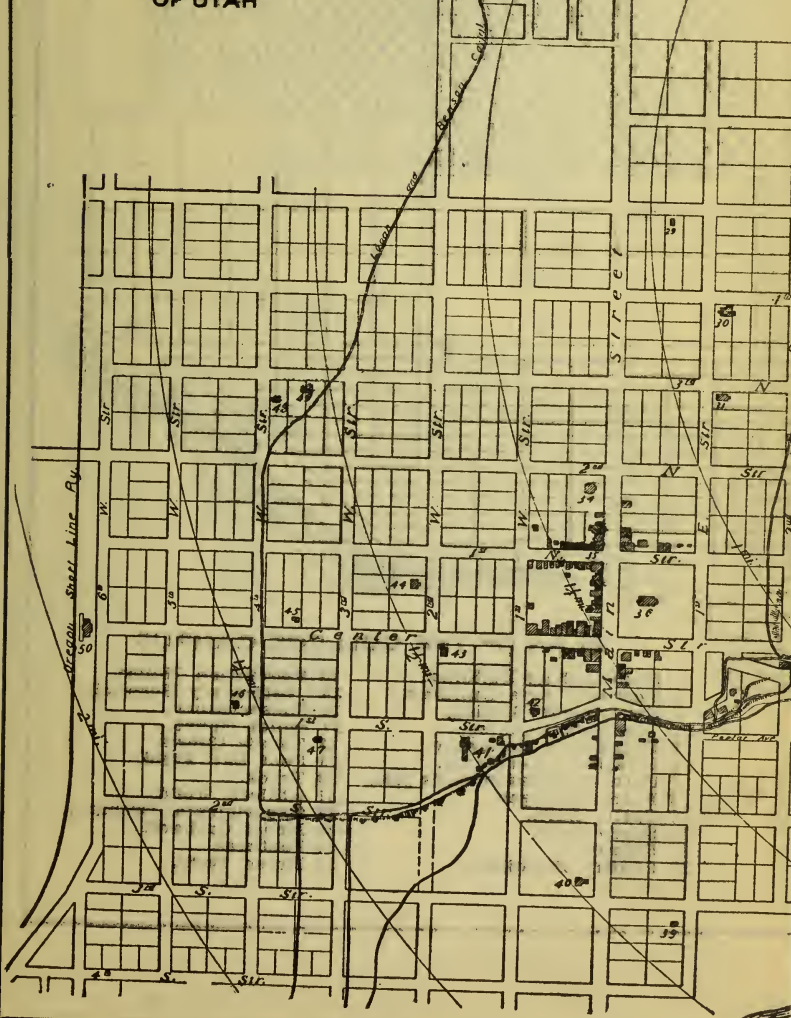
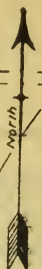
THE LIBRARY OF THE  
MAY 16 1928  
UNIVERSITY OF ILLINOIS

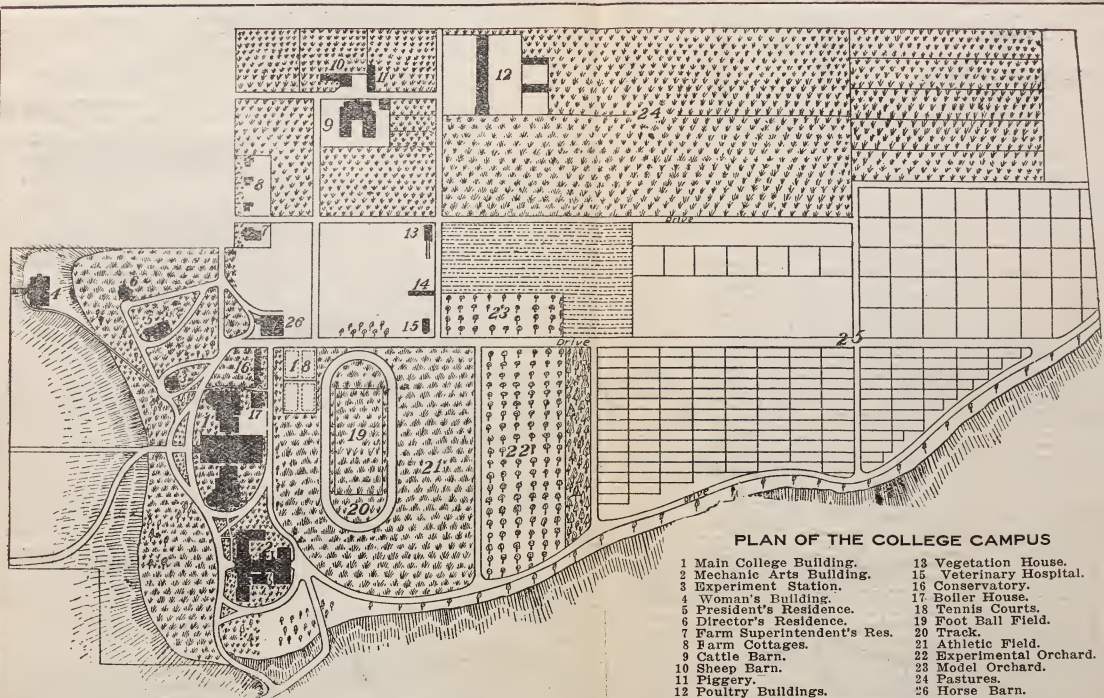


THE LIBRARY OF THE

MAY 16 1928

MAP OF  
UNIVERSITY OF ILLINOIS  
**LOGAN CITY**  
AND  
**AGRICULTURAL**  
**COLLEGE**  
OF UTAH



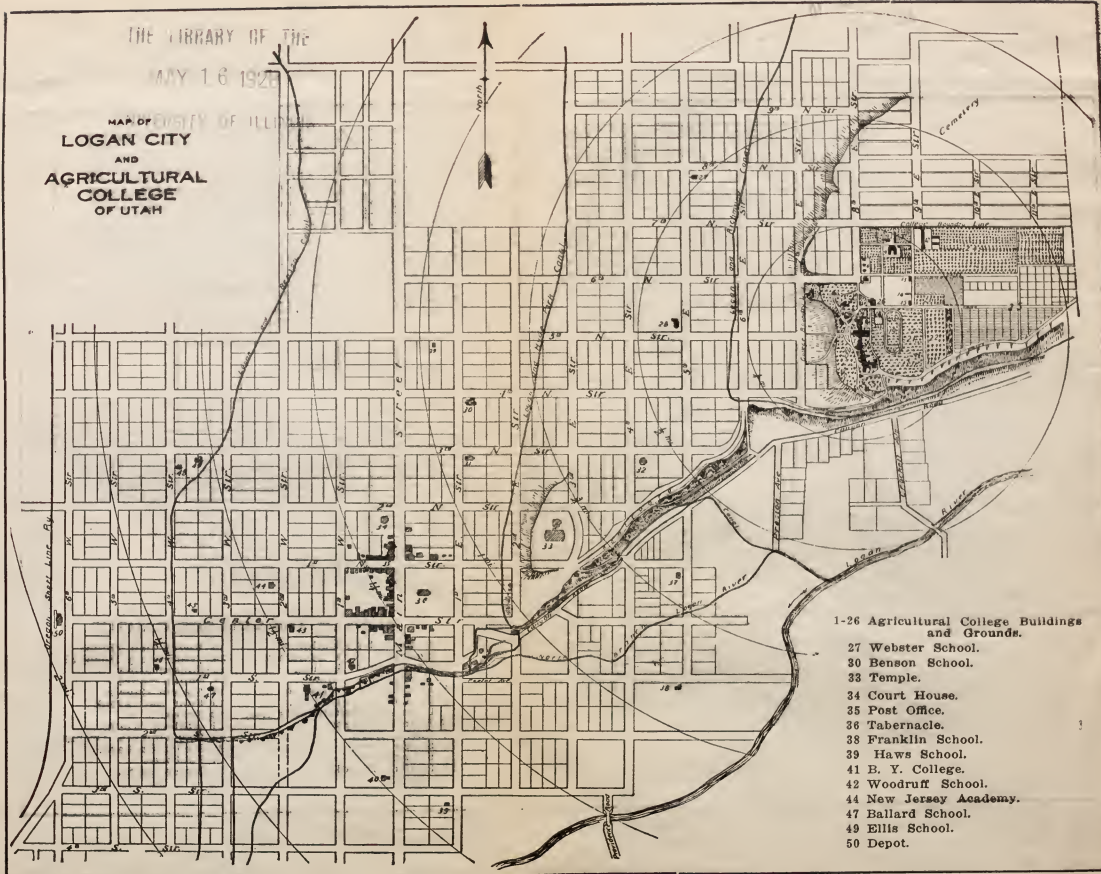




THE LIBRARY OF THE

MAY 16 1928

MAP OF  
LOGAN CITY  
AND  
AGRICULTURAL  
COLLEGE  
OF UTAH



1-26 Agricultural College Buildings  
and Grounds.

27 Webster School.

30 Benson School.

33 Temple.

34 Court House.

35 Post Office.

36 Tabernacle.

38 Franklin School.

39 Haws School.

41 E. Y. College.

42 Woodruff School.

44 New Jersey Academy.

47 Ballard School.

49 Ellis School.

50 Depot.



1-26 Agricultural College Buildings and Grounds.

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- 49 Ellis School.
- 50 Depot.



VIEW ON THE GROUNDS.



VIEW FROM COLLEGE HILL.



THE LIBRARY  
OF THE  
UNIVERSITY OF ILLINOIS



GENERAL VIEW OF BUILDINGS AND GROUNDS.

# CATALOGUE

OF THE

## AGRICULTURAL COLLEGE

OF UTAH

FOR

1909-1910

THE LIBRARY OF THE

MAY 16 1928

UNIVERSITY OF ILLINOIS

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With List of Students for 1908-1909

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LOGAN, UTAH

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Published by the College  
June, 1909



1909.

JANUARY

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1910.

JANUARY

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FEBRUARY

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MARCH

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JULY

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SEPTEMBER

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OCTOBER

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DECEMBER

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25	26	27	28	29	30	31
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## COLLEGE CALENDAR, 1909-1910.

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### FIRST TERM.

1909.

September 14, Tuesday:	Entrance examinations. Registration of former students, and of new students, who are admitted on certificates.
September 15, Wednesday:	Classes organized.
November 24, Wednesday noon:	Thanksgiving recess begins. School will be in session the preceding Monday.
November 30, Tuesday:	Instruction resumed.
December 18, Saturday noon:	Holiday recess begins.
January 4, Tuesday:	Instruction resumed.
January 22, Saturday:	First term ends.

### SECOND TERM.

1910.

January 25, Tuesday:	Second term begins.
February 12, Saturday:	Lincoln's Birthday.
February 22, Tuesday:	Washington's Birthday.
April 15, Friday:	Arbor Day.
May 22, Sunday:	Baccalaureate sermon.
May 23, Monday:	Class Day. Alumni Reunion.
May 24, Tuesday:	Commencement. Alumni Banquet and Ball.
June 1, Wednesday:	Summer vacation begins.

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\*For the dates of the different winter courses and of the Summer School see the special circulars.

## BOARD OF TRUSTEES.

LORENZO N. STOHL .....	Brigham
THOMAS SMART .....	Logan
SUSA YOUNG GATES .....	Salt Lake City
JOHN Q. ADAMS .....	Logan
ELIZABETH C. McCUNE .....	Salt Lake City
J. W. N. WHITECOTTON.....	Provo
MATHONIAH THOMAS .....	Salt Lake City
JOHN DERN .....	Salt Lake City
JOHN C. SHARP .....	Salt Lake City

### OFFICERS OF THE BOARD OF TRUSTEES.

LORENZO N. STOHL .....	President
ELIZABETH C. McCUNE .....	Vice President
JOHN T. CAINE, JR. ....	Recording Secretary and Auditor
JOHN L. COBURN .....	Financial Secretary
ALLAN M. FLEMING .....	Treasurer

### STANDING COMMITTEES OF THE BOARD OF TRUSTEES.

#### *Executive Committee.*

Lorenzo N. Stohl, Mrs. A. W. McCune and Thomas Smart.

#### *Committee on Agriculture.*

John Q. Adams, John Dern and John C. Sharp.

#### *Committee on Mechanic Arts.*

John Dern, J. W. N. Whitecotton and John C. Sharp.

#### *Committee on Domestic Science and Arts.*

Susa Young Gates, Mrs. A. W. McCune and John Dern.

#### *Committee on Commerce.*

John Dern, J. W. N. Whitecotton and Mrs. A. W. McCune.

#### *Committee on Experiment Station.*

Thomas Smart, Mathoniah Thomas and John Q. Adams.

#### *Committee on Faculty and Courses of Study.*

J. W. N. Whitecotton, Mathoniah Thomas and Susa Y. Gates.

#### *Committee on Livestock.*

John C. Sharp, Thomas Smart and Mathoniah Thomas.

#### *Extension Work.*

Mathoniah Thomas, Susa Young Gates and John Q. Adams.

#### *Buildings and Grounds.*

Thomas Smart, John Q. Adams and John Dern.

#### *Auditor.*

J. W. N. Whitecotton.

# Officers of Administration and Instruction.

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## THE COLLEGE FACULTY.

---

*(Arranged in Groups in the Order of Seniority of Appointment.)*

JOHN ANDREAS WIDTSOE, A. M., Ph. D.,  
PRESIDENT.  
*Professor of Chemistry.*

WILLARD SAMUEL LANGTON, B. S.,  
*Professor of Mathematics.*

ELMER DARWIN BALL, M. Sc., Ph. D.,  
DIRECTOR, EXPERIMENT STATION AND DIRECTOR OF SCHOOL OF  
AGRICULTURE.

GEORGE WASHINGTON THATCHER.  
*Professor of Music.*

ROBERT STARR NORTHROP, B. S.,  
*Professor of Horticulture and Botany.*

GEORGE THOMAS, A. M., Ph. D.,  
DIRECTOR, SCHOOL OF COMMERCE.  
*Professor of Economics.*

WILLIAM PETERSON, B. S.,\*  
*Professor of Geology.*

HYRUM JOHN FREDERICK, D. V. M.,  
*Professor of Veterinary Science.*

---

\*On leave of absence.

FRANK RUSSELL ARNOLD, A. M.,  
*Professor of Modern Languages.*

JOSEPH WILLIAM JENSEN, S. B.,  
ACTING DIRECTOR, SCHOOL OF MECHANIC ARTS.  
*Professor of Irrigation Engineering.*

JAMES CHRISTIAN HOGENSON, M. S. A.  
*Professor of Agronomy.*

CHRISTIAN LARSEN, A. M.,  
*Professor of English.*

SAMUEL HENRY GOODWIN, B. D.,  
*Professor of Economic Ornithology.*

LEWIS ALFORD MERRILL, B. S.,  
*Director, Extension Work.*

JOHN THOMAS CAINE, JR., B. S.,  
REGISTRAR; SECRETARY OF THE FACULTY AND BOARD OF TRUSTEES.

EDWARD GAIGE TITUS, M. S.,  
*Professor of Zoology and Entomology.*

ROBERT STEWART, Ph. D.,  
*Professor of Chemistry.*

JOHN THOMAS CAINE III, M. S. A.,  
*Professor of Animal Husbandry.*

FRANKLIN LORENZO WEST, B. S.,  
*Professor of Physics.*

CLAYTON TRYON TEETZEL, LL. B.,  
*Professor of Physical Education.*



ELLEN ALDEN HUNTINGTON, A. M.

DIRECTOR, SCHOOL OF DOMESTIC SCIENCE.

*Professor of Domestic Science.*

LOCHLIN W. CAFFEY, 1ST. LIEUT., U. S. A.,

*Professor of Military Science and Tactics.*

WILLIAM H. HOMER, JR., M. S.,

*Lecturer on Horticulture, Extension Department.*

BLANCHE COOPER, B. S.,

*Associate Professor of Domestic Science.*

RHODA BOWEN COOK,

*Assistant Professor of Domestic Arts.*

ELMER GEORGE PETERSON, B. S.\*

*Assistant Professor of Zoology and Entomology.*

CALVIN FLETCHER, B. Pd.,

*Assistant Professor of Art.*

JOSEPH EAMES GREAVES, M. S.,

*Assistant Professor of Agricultural Chemistry.*

N. ALVIN PEDERSEN, A. B.,

*Assistant Professor of English.*

AMANDA HOLMGREN, B. S.,

*Assistant Professor of English.*

JOSHUA PERCY GODDARD, A. B., C. P. A.,

*Assistant Professor of Accounting.*

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\*On leave of absence.

THOMPSON E. WOODWARD, B. S.,  
*Assistant Professor of Dairying.*

CHARLES PIPER SMITH, A. M.,  
*Assistant Professor of Botany.*

ELIZABETH CHURCH SMITH, B. L.,  
*Librarian.*

CHARLES WALTER PORTER, A. M.,  
*Assistant Professor of Chemistry.*

GEORGE B. HENDRICKS, A. M.,  
*Assistant Professor of Economics.*

HARRY C. PARKER, B. S.,  
*Assistant Professor of Geology.*

ISAAC BLAIR EVANS, A. B.,  
*Assistant Professor of History.*

AUGUST J. HANSEN,  
*Foreman in Carpentry.*

EDWARD PARLEY PULLEY, B. S.,  
*Instructor in Mechanical Engineering.*

ROY RUDOLPH, B. S.,  
*Instructor in Mathematics.*

GERTRUDE VIBRANS,  
*Instructor in Sewing.*

JONATHAN SOCKWELL POWELL,  
*Instructor in Art.*

SARA HUNTSMAN,  
*Instructor in English.*

AARON NEWHEY,  
*Instructor in Forging.*

CHARLOTTE KYLE, A. M.,  
*Instructor in English and History.*

JOHN L. COBURN, B. S.,  
FINANCIAL SECRETARY.

JOHN D. VAN WAGONER,  
PRESIDENT'S PRIVATE SECRETARY.

HAZEL LOVE, B. S.,  
*Instructor in Domestic Science.*

LOUIE E. LINNARTZ,  
*Instructor in Music.*

S. E. CLARK,  
*Instructor in Piano and Concert.*

GEORGE M. TURPIN, B. S.,  
*Instructor in Poultry Husbandry.*

W. L. WALKER, B. S.,  
*Instructor in Chemistry and Mathematics.*

ALMA M. DAVIS,  
*Instructor in Stenography and Typewriting.*

CHARLOTTE STEWART, A. B.,  
*Instructor in English and Physical Education for Women.*

HOWARD P. MADSEN,  
*Instructor in Carpentry.*

DAVID HUGHES,  
*Instructor in Woodcarving.*

JEAN CROOKSTON,  
*Assistant in Sewing.*

EDWARD H. WALTERS, B. S.,  
*Assistant in Chemistry.*

BYRON ALDER,  
*Assistant in Carpentry.*

HATTIE SMITH,  
*Assistant in Library.*

ERNEST P. HOFF, B. S.,  
*Assistant in Zoology.*

LIZZIE O. MCKAY, B. S.,  
*Assistant in Domestic Science.*

HEBER J. WEBB,  
*Assistant in Forging.*

---

CHARLES BATT,  
*Superintendent of Buildings and Grounds.*

RASMUS OLUF LARSEN,  
*Head Janitor.*

EDA DEHLIN,  
*Superintendent of Lunch Room.*

EXPERIMENT STATION STAFF.

---

ELMER DARWIN BALL,  
*Director and Entomologist.*

ROBERT STARR NORTHROP,  
*Horticulturist.*

HYRUM JOHN FREDERICK,  
*Veterinarian.*

JOHN T. CAINE, III,  
*Animal Husbandman.*

ROBERT STEWART,  
*Chemist.*

JAMES CHRISTIAN HOGENSON,  
*Agronomist.*

SAMUEL H. GOODWIN,  
*Economic Ornithologist.*

EDWARD GAIGE TITUS,  
*Entomologist.*

LEWIS ALFORD MERRILL,  
*Agronomist in Charge of Arid Farms.*

THOMPSON E. WOODWARD,  
*Dairyman.*

JOSEPH EAMES GREAVES,  
*Assistant Chemist.*



GEORGE M. TURPIN,  
*Assistant Poultryman.*

W. L. WALKER,  
*Assistant Chemist.*

EDWARD H. WALTERS.  
*Assistant Chemist.*

ERNEST P. HOFF,  
*Assistant Entomologist.*

P. V. CARDON,  
*Assistant Agronomist.*

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*In Charge of Co-operative Investigation with the U. S. Department of Agriculture:*

WALTER W. McLAUGHLIN,  
*Irrigation Engineer.*

CHARLES F. BROWN,  
*Drainage Engineer.*

F. D. FARRELL,  
*Assistant Agronomist.*

R. A. HART,  
*Assistant Drainage Engineer.*

## THE COLLEGE COUNCIL.

---

THE PRESIDENT, Chairman.

THE REGISTRAR, *ex officio*.

PROFESSOR WILLARD SAMUEL LANGTON.

PROFESSOR ELMER DARWIN BALL.

PROFESSOR GEORGE WASHINGTON THATCHER.

PROFESSOR ROBERT STARR NORTHROP.

PROFESSOR GEORGE THOMAS.

PROFESSOR WILLIAM PETERSON.

PROFESSOR HYRUM JOHN FREDERICK.

PROFESSOR FRANK RUSSELL ARNOLD.

PROFESSOR JOSEPH WILLIAM JENSEN.

PROFESSOR JAMES CHRISTIAN HOGENSON.

PROFESSOR CHRISTIAN LARSEN.

PROFESSOR SAMUEL HENRY GOODWIN.

PROFESSOR LEWIS ALFORD MERRILL.

PROFESSOR EDWARD GAIGE TITUS.

PROFESSOR ROBERT STEWART.

PROFESSOR JOHN THOMAS CAINE, III.

PROFESSOR FRANKLIN LORENZO WEST.

PROFESSOR CLAYTON TRYON TEETZEL.

PROFESSOR ELLEN ALDEN HUNTINGTON.

LIEUTENANT LOCHLIN W. CAFFEY.

ASSOCIATE PROFESSOR BLANCHE COOPER.

ASSISTANT PROFESSOR RHODA BOWEN COOK.

ASSISTANT PROFESSOR ELMER GEORGE PETERSON.

ASSISTANT PROFESSOR CALVIN FLETCHER.

ASSISTANT PROFESSOR JOSEPH EAMES GREAVES.

ASSISTANT PROFESSOR N. ALVIN PEDERSEN.

ASSISTANT PROFESSOR AMANDA HOLMGREN.

ASSISTANT PROFESSOR JOSHUA PERCY GODDARD.

ASSISTANT PROFESSOR THOMPSON E. WOODWARD.

ASSISTANT PROFESSOR CHARLES PIPER SMITH.

ASSISTANT PROFESSOR ELIZABETH CHURCH SMITH.

ASSISTANT PROFESSOR CHARLES WALTER PORTER.

ASSISTANT PROFESSOR GEORGE B. HENDRICKS.

ASSISTANT PROFESSOR HARRY COOPER PARKER.

ASSISTANT PROFESSOR ISAAC BLAIR EVANS.

## STANDING COMMITTEES.

1909-1910.

The President of the College is *ex officio* a member of each standing committee.

1. *School of General Science*.—Professors Langton, Thatcher, Titus, Stewart, Fletcher.

2. *High School*.—Professors Pedersen, West, Goddard.

3. *Scholarship and Graduation*.—Professors Arnold, Hogenson, Titus, West, Cooper.

4. *College Publications*.—Professors Larsen, Arnold, Pedersen, Holmgren, Evans.

5. *Attendance and College Roll*.—Professors Thomas, Titus, Caine, Jr., Greaves, Smith, Hendricks, Evans.

6. *Student Affairs*.—Professors Caine, Jr., Frederick, Greaves, Holmgren, Miss Smith, Miss Love.

7. *Athletics*.—Professors Teetzel, Langton, Caine, III, Caffey, Parker.

8. *Publicity*.—Professors Porter, Hogenson, Merrill, Huntington.

9. *Exhibits*.—Professors Titus, Caine, III, Cook, Fletcher, Porter.

10. *Debating*.—Professors Goddard, Thomas, Larsen, Pedersen, Hendricks, Evans.

11. *Entrance Requirements*.—Professors Jensen, Woodward, Parker, Mr. Rudolph.

12. *Student Employment*.—Professors Stewart, Frederick, Cooper, Mr. Hansen, Mr. Davis.

13. *Student Body Organization*.—Professors Langton, Ball, Thomas.

14. *Graduate Employment*.—Professors Ball, Jensen, Huntington.

15. *Summer School*.—Professors Thomas, Larsen, Caine, Jr., West.

# AGRICULTURAL COLLEGE OF UTAH.

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## General Information.

The Agricultural College of Utah constitutes part of the public school system of the State. It comprises five different schools,—the school of Agriculture, the School of Domestic Science and Arts, the School of Commerce, the School of Mechanic Arts, and the School of General Science; also the Agricultural Experiment Station, which, while not providing directly for instructional work, is one of the most important departments of the institution. The organization, purpose, and equipment of the College, together with the character and extent of the work offered, are described in the following pages.

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## HISTORY.

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The Agricultural College of Utah was founded in 1888, when, on March 8th, the Legislative Assembly accepted the terms of the national law passed by Congress on July 2d, 1862. Under this Act of Congress, and the Enabling Act, providing for the admission of Utah as a state, 200,000 acres were granted to the State of Utah, from the sale of which lands there should be established a perpetual fund, the interest to be used in maintaining the College.

Under the Hatch Act, approved in 1887, the State receives \$15,000 annually for the Experiment Station.

Under the Morrill Act of 1890, the State receives \$25,000 annually for instruction in the Agricultural College.

Under the Adams Act of 1906, the State will ultimately receive an additional \$15,000 annually for research work by the Experiment Station.

Under the Nelson Act of 1907, the Morrill Act was so amended that the State will receive an increase of \$5,000 annually, until the annual amount so received reaches \$50,000 per year.

These various federal appropriations, together with the annual income from the land-grant fund, represent the income from the general government, but as most of these funds must be used in accordance with the law for specific purposes, the institution is dependent on State appropriations for funds with which to carry on the work of instruction, etc. These needs have been generously met in the past by the various Legislative Assemblies of the State. In 1888 the sum of \$25,000 was appropriated for buildings, and the county of Cache and the city of Logan gave one hundred acres of land on which to locate the College. In September, 1890, the institution was first opened for the admission of students, degree courses being offered in Agriculture, Domestic Arts, Civil Engineering, Mechanic Arts, and Commerce; a Preparatory Course and short courses in Agriculture and Engineering were also given. Since that time the State has, on various occasions, appropriated sufficient funds to erect and maintain in order all the buildings described in a later section, besides providing largely for instruction.

Since that time, also, many improvements have been made in the courses; some have been abandoned, several Manual Training courses in Agriculture, Mechanic Arts, and Domestic Science have been added, the standard of the College work has been raised, and in 1903 the Board of Trustees established the School of Agriculture, the School of Domestic Science, the School of Mechanic Arts, the School of Commerce, and the School of General Science.



## GOVERNMENT.

The government of the College is vested primarily in the Board of Trustees, and, under their control, the four other administrative bodies,—the Directors' Council, the College Council, the College Faculty, and the Staff of the Experiment Station. These, in their several capacities, determine the policy and maintain the efficiency of the institution.

THE BOARD OF TRUSTEES consists of nine members, appointed by the Governor with the approval of the State Senate. This Board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations. Vested in it is the power to establish professorships and to employ the instructing force and other officers of the College.

Between sessions, the power of the trustees rests with an executive committee, whose actions are referred to the Board for their approval. Another committee is concerned with the funds and accounts of the College, while a third has general charge of all buildings and repairs throughout the institution. In addition to these there are committees, largely advisory, having to do with the employment and service of College officers, and with the work of particular departments.

THE DIRECTORS' COUNCIL consists of the President, the heads of the different schools and the Superintendent of Extension Work. This body has immediate supervision of the instruction and discipline in all the various schools. It constitutes a permanent executive and administrative committee of the College Council and Faculty.

THE COLLEGE COUNCIL consists of the President of the Board of Trustees, the President of the College, the Registrar, and the professors, the associate professors, and the assistant professors. All the important questions of discipline and policy are considered by this body.

THE COLLEGE FACULTY includes the President, the professors, the associate professors, the assistant professors, the librar-

ian ,the instructors, and the assistants. As an administrative body it is concerned with the ordinary questions of methods and discipline and with various matters pertaining to the general welfare of the College. Through its standing committees it is in more intimate contact with the student body and with the life and interests of the college community.

THE STANDING COMMITTEES have delegated to them the immediate direction of all the various phases of college life, such as the enrollment and progress of students in the various schools, and the general direction of the work there carried on. The conduct of the student in his college home and his regularity in performing college duties; the publications of the College and the students; the interests of the students on the athletic field, in the amusement halls, and in their various organizations,—all these things are within the province of appropriate committees, consisting largely of members of the council.

THE EXPERIMENT STATION STAFF consists of the President of the College, the Director of the Station, and the chiefs, with their assistants, of the departments of Agronomy, Horticulture, Animal Husbandry, Dairy Husbandry, Entomology, Chemistry, Irrigation Engineering, Poultry Culture, Veterinary Science, and Forestry. This body is employed in the investigation of problems peculiar to agriculture in this portion of the country, the purpose being to improve conditions and results. It is further responsible for the circulation, through private correspondence and regular bulletins, of such information as is of practical value to the farming communities.

THE STUDENTS. The College is maintained at public expense for the public good. The students, therefore, are under a peculiar obligation to perform faithfully all their duties to the State, the institution, and the community. Most important of these is an active interest in all that concerns the moral and intellectual welfare of the College. Regularity of attendance, faithful attention to studies, and exemplary personal conduct are insisted upon at all times, and the administrative bodies of the College are fully empowered to secure these results.

## POLICY.

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It is the policy of the Agricultural College of Utah, in accordance with the spirit of the law under which it is organized, to provide a liberal, thorough, and practical education. The two extremes in education, empiricism and the purely theoretical, are avoided, the practical being based upon, and united with the thoroughly scientific. In addition to the practical work of the different courses, students are thoroughly trained in the related subjects of science, and in mathematics, history, English, and modern languages. While the importance of practical training is emphasized, the disciplinary value of education is kept constantly in view. The object is to inculcate habits of industry and thrift, of accuracy and reliability, and to foster all that makes for right living and good citizenship.

Under this general policy, the special purpose of the Agricultural College of Utah is to be of service in the upbuilding of the State of Utah, and the Great West to which it belongs. The instruction in Agriculture, therefore, deals with the special problems relating to the conquest of the great areas of unoccupied lands, the proper use of the water supply, the kinds of crop or live stock produced which in Utah may be made pre-eminent; in Mechanic Arts, the most promising trades are pointed out, and they are taught in a manner to meet the needs of the State; in Commerce the present commercial conditions of the State are studied and the principles and methods to be applied in the commercial growth of Utah are given thorough investigation. Likewise, the women who study Domestic Science are taught house-keeping and homemaking from the point of view of prevailing Utah conditions.

The dominating spirit of the policy of the Agricultural College of Utah is to make the common work of the world—the work that most men and women must do—both profitable and pleasant. The motto of the College is, Labor is Life.

## LOCATION, BUILDINGS AND GROUNDS.

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The Agricultural College of Utah is in Logan, the county seat of Cache County, which is one of the most prosperous agricultural counties in the State. The city has a population of about 7,000; it is noted for its freedom from vice, is quiet, orderly, clean and generally attractive, with neat homes, good, substantial public buildings, electric lights, and a water system. Cement pavements extend from the Station to the College. The citizens are thrifty and progressive. The College is beautifully situated on a broad hill overlooking the city, one mile east of Main street, and commands a view of the entire valley and of its surrounding mountain ranges. The beauty of the location is perhaps unsurpassed by that of any other college in the country. A few hundred yards to the south is the Logan River. A mile to the east is a magnificent mountain range and a picturesque canyon. In other directions are towns and farms covering the green surface of Cache Valley, and distinctly visible through the clear atmosphere. The valley is a fertile, slightly uneven plain, 4,500 feet above sea level, about twelve by sixty miles in dimensions, almost entirely under cultivation and completely surrounded by the Wasatch Mountains. It is one of the most beautiful and healthful valleys in the western region.

On this site the College now has nearly twenty buildings, all modern, all well lighted and well heated, and all carefully planned and constructed to meet the purpose for which each was intended.

The Main Building, of brick and stone, is 360 feet long, 200 feet deep in the central part, and four stories high. It contains the large auditorium, seating about 1,500; the administrative offices; the library; the gymnasium; and all the various class rooms and laboratories except those of Mechanic Arts.

The Woman's Building, formerly the Dormitory, is a large four-story brick building fifty by eighty feet, situated at three minutes' distance from the Main Building on the north-west corner of the campus. Cement walks connect it with the other



school buildings and with Main Street. It is one of the largest and best equipped structures devoted entirely to Domestic Science and Arts in the whole Inter-Mountain Region. It has automatic elevator service from the laundries in the basement to the spacious studios on the fourth floor. It is steam-heated, and is, in every respect a model building. On the first floor are two kitchen laboratories with individual work tables accommodating forty girls at once, store-rooms, a large class-room, office, library, rest room, and reception room. On the second floor is an experimental kitchen, a kitchen with electric equipment, a model home kitchen, and model home dining room, a very large class room and an equally large dining room. The latter two rooms may be combined for special occasions, banquets, etc. The upper floors are devoted entirely to Domestic Arts. They contain offices, millinery rooms, sewing, dressmaking, and fitting rooms, with all necessary equipment. On the fourth floor are studios and nursing rooms.

The Experiment Station Building, a two-story brick structure 45 feet long and 35 feet wide, contains the offices of the station staff, the laboratory of the Horticulturist, and a dark room for photographic work.

The Mechanic Arts Building is a one-story brick structure, with the exception of the central part, which is two stories high. It has a ground floor area of 16,600 square feet, divided into four groups of rooms, viz.: wood working department, machine shop, foundry, and draughting rooms. On the second floor are the Mechanic Arts Museum, blue-printing room, room for painting and staining, and a class room.

Two Conservatories, each 90 by 25 feet, divided into various compartments for the purpose of regulating the temperature, are used to supplement class work in botany, floriculture and horticulture.

The old Veterinary Hospital, a two-story stone and frame structure, 18 by 42 feet, containing a well-equipped dispensary, operating room, and stalls for patients, is being enlarged and re-

modelled. When completed it will be 30 by 70 feet, giving ample room for all the work in veterinary medicine at present offered by the College.

This summer a commodious stock-judging pavilion is being erected. Here the students in animal industry will carry on their work instead of being obliged to remain outdoors in all sorts of weather, as heretofore.

The Barns. *The horse barn*, a wooden structure, 60 feet square, contains model sanitary stables for horses, storage divisions for hay, grain and seed, and rooms for carriages and wagons, farm implements, and machinery; also the farm foreman's room, and repair shop. A ten-horsepower electric motor furnishes power for grain threshing, feed grinding, and fodder shredding. *The cattle barn*, 106 feet by 104 feet, is provided with the most modern equipment throughout, including iron stalls, cement floors and mangers, etc. There are accommodations for seventy-five head of cattle; also hospital rooms, feed rooms, a milk room, a root cellar, and storage room for hay and grain. *The sheep barn*, 94 feet by 41 feet, has accommodations for seventy-five sheep, and storage room for feed. *The hog barn* is a wooden structure, 65 feet by 31 feet. It contains two feed rooms, a cook room, an abattoir, and twelve pens, each of which is provided with an outside run. This building accommodates sixty mature animals.

The Poultry Building covers 230 feet by 25 feet, with yards 100 feet wide on each side. The building is divided into two sections:—first, the brooder section, with a capacity for about one thousand chicks; second, the experimental section, with a capacity for over five hundred hens. This section is divided into thirty-two pens; it is shut off from the public and used for conducting experiments on the different questions of poultry culture. The building is heated by a hot water system. In the front part are an office, a feed and weigh room, a store room and a sleeping apartment.

A Modern Incubator Building has recently been provided which includes a commodious incubator cellar, an egg distributing



and storage room, a laboratory room, and a dark room for testing the eggs during incubation. The building is well equipped with modern incubators of different makes, egg distributing and turning tables, pedigree hatching trays, hygrometers, thermometers, acetylene and electric egg testers, and such chemical and other apparatus as is required for thorough work in the investigation of incubation problems.

The land occupied by the College and its several departments embraces about 116 acres. Of this, thirty-five acres constitute the Campus, laid out with flower-beds, broad stretches of lawn, and wide drives and walks leading to the College buildings. During the summer the conservatory contributes its hardy plants for lawn decoration.

Immediately east of the Main Building are the parade grounds and athletic field, of about ten acres. The farms comprise 71 acres; the orchards and the small fruit and vegetable gardens, 10 acres. All parts of the College grounds are used by the professors in charge of instruction in agriculture and horticulture and by the Experiment Station staff for the purpose of practical illustration in their respective departments and for experimentation.

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## EQUIPMENT.

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**AGRONOMY.** The Department of Agronomy is provided with a large collection of agricultural plants, seeds and soils representing the main crops and types of soils of the inter-mountain region. The College farms are equipped with the best and latest farming implements and machinery for carrying on work scientifically and successfully. They are divided, for illustrative and experimental purposes, into numerous plats on which many varieties of farm crops are grown and upon which important experiments are carried on.

The Soil Physics Laboratory has a good supply of apparatus for accurate and up-to-date work, including balances, micro-

scopes, drying ovens, hot-water baths, compacting machines, and apparatus for determining the mechanical analysis of soils.

The Farm Crops Laboratory has recently been equipped with gas and has a large supply of farm crops on hand for illustrative and laboratory work. It is supplied with magnifying glasses, a Grey seed weigher, a vertical air-blast seed separator, a seed germinator and tester, as well as enlarged and dissectible models of various grains, grasses and root crops.

**ANIMAL INDUSTRY.** For this work general use is made of the College barns, live-stock, dairy, etc. The live-stock includes various breeds of horses, cattle, sheep, and swine. The erection of a large new live-stock pavilion and the purchase of many additional pure-bred animals, will greatly facilitate the work in stock-judging.

The model poultry house with its equipment, and the new incubator cellar, afford special facilities for illustrative and practical work with poultry. Several strains of pure-bred chickens, ducks and geese are kept for experimental purposes.

**DAIRYING.** The creamery occupies a floor space of about three thousand square feet, divided into seven rooms for the various processes of dairy work, and equipped with all the apparatus necessary for the processes of butter and cheese-making and milk-testing. It is run on a commercial basis, milk being purchased from the farmers living near Logan. Ample facilities are provided for illustrating the handling of milk for the retail trade. The department has an eight-horsepower boiler and a six-horsepower engine, and model cold storage rooms for butter and cheese.

**THE BOTANICAL LABORATORY** has a good supply of apparatus for systematic and microscopic work. The herbarium contains 3,000 mounted and named specimens, and there are 700 samples of seeds for use in economic botany. The general equipment includes compound microscopes, Bausch and Lomb dissecting microscopes, microtome, and everything necessary for successful botanical work. The orchard and the small fruit and vegetable gardens are

used in connection with the work in botany and horticulture for illustrative purposes.

THE NEW VETERINARY LABORATORY is supplied with all the more important surgical instruments, and other material found in a well equipped hospital. A modern operating table, an operating room, box stalls for patients, the necessary medicines, are all at hand. In this laboratory the agricultural students have practice and observation in the treatment of animals.

THE DEPARTMENT OF DOMESTIC SCIENCE AND ARTS occupies an entire building,—the new Woman's Building. This large brick structure consists of a spacious basement and four stories connected by automatic elevator service. In the basement are the laundries with numerous stationary tubs, a Chicago clothes-drier, many ironing tables, and other necessary furnishing. The Department of Domestic Science, occupying the entire first and second floors, is fitted out with the latest, and most approved fixtures and equipment. The laboratory kitchens have individual combined work-tables and cupboards, with gas stove on each, for forty students. One kitchen is electrically equipped. There are coal ranges and gas ranges, ample pantries and store-rooms, and all the utensils and modern conveniences necessary for teaching cooking. The various dining rooms have model furnishings,—extension tables, chairs, sideboards, and generous supply of china, silver, and table linen. The department also has various charts and cabinets of food materials showing composition and processes of manufacture. There are rooms with proper furnishings for instruction in home nursing. The Department of Domestic Arts occupies the third and fourth floors, and is generously furnished with the latest improved machines, small sewing tables, low chairs, cutting tables tracing boards, electric irons, wardrobes, cabinets and cupboards for the finished and unfinished work, and museum showing the process of manufacturing wool, silk, cotton and linen.

THE COMMERCIAL DEPARTMENT is equipped for thorough and efficient work in modern business courses. The entire third floor

of the front of the Main Building, covering a floor area of 7,225 square feet, is occupied by the department. Each room is specially designed and furnished for the work to be conducted in it. Practice is given in the methods of modern banking, wholesale, retail, and commission trade, and freight, insurance and real estate offices. The room for typewriting contains a full complement of standard machines. The rooms for stenography and penmanship are conveniently furnished for efficient work.

THE MECHANIC ARTS are taught by means of a large and carefully selected equipment for practical work in shop, field and laboratory. The carpentry rooms are supplied with seventy benches with full sets of tools. The wood-working machinery includes fifteen pattern-makers' lathes, universal saw table, jig and band saws, planer, mortiser and borer, shaper, and sander; and there are the usual clamps, vises, glue tables, veneer-presses and other special tools required for a shop of this kind. For the work in forging there are provided twenty-three single and eight double forges, each with a complete equipment of anvil and tools. In addition, there are two furnaces, one belted power hammer, drills, special swages, cutting-off machines and leveling tables, with a considerable assortment of special tools. The equipment for foundry work includes iron-melting cupola, brass furnace, core oven, annealing furnaces, flasks, patterns, ladles, crucibles, and full sets of regular tools for flask and floor moulding. The outfit used in carriage building comprises, in addition to the required benches, a full supply of carriage-builders' tools, including hub-boring and boxing machines, spoke-tenoning machine, felloe-boring machine, tirebender, etc. In the room devoted to machine work in iron are found six large engine lathes, three universal milling machines, a universal grinding machine, two speed lathes, a large radical drill press, sensitive drill (built by students), two crank shapers, two large planers, grindstones, and emery wheels; every machine having its regular equipment of tools and attachments. The tool room is well supplied with drills, reamers, cutters of various kinds, files, calipers, etc. All machinery, includ-



ing blast and exhaust systems for the forge shop and foundry, is electrically driven.

A special Mechanic Arts Library is located in the Mechanic Arts Building. It contains the private library of the professor, with such other books from the general library as may be required for special study. A very extensive list of manufacturers' catalogues has been collected and classified, and forms an important part of this library.

THE BACTERIOLOGICAL LABORATORY is well equipped with modern apparatus for the work offered. Each student is provided with a high-power Leitz or Bausch and Lomb microscope. One microscope with triple nose-piece, fitted with 1-12 and 1-16 oil-immersion objectives, Abbe condenser, and rotary and mechanical stage, is used for identification work. The equipment includes an autoclave, hot air and steam sterilizers, incubator, refrigerators, aerobic plate apparatus, anaerobic tube apparatus, microtome, analytic balance, cages, permanent mounts, glassware, chemicals, stains and culture media.

THE ZOOLOGICAL LABORATORY is equipped with water and gas, and has for use in laboratory work the most improved modern instruments, many enlarged models, a *papier mache* manikin, articulated and disarticulated human skeletons, skeletons from each group of vertebrates, collections of mounted birds, mammals, reptiles and fishes, and alcoholic material in many groups. The department has exhibition and systematic collections of insects, and the private collections and libraries of the professors are available to students taking work in the department.

THE CHEMICAL LABORATORIES are well equipped for elementary and advanced work in chemistry. Several valuable collections of gums, oils, coloring matters, foods, etc., are important aids to the students in this department. The laboratories are fitted with water, gas, hoods, and all other conveniences.

THE PHYSICAL LABORATORY occupies a suite of rooms on the second floor. The equipment is fairly complete, consisting of all the necessary pieces of apparatus for class demonstration; a set

of apparatus for elementary laboratory work, sufficient for ten students working on the same experiment; and all pieces required for an experimental course in mechanics, heat, electricity and light.

THE COLLEGE MUSEUM contains a large number of specimens illustrative of geology, mineralogy, paleontology, and vertebrate and invertebrate zoology, including a large series of the insects of the intermountain region; also about four thousand five hundred species of the Rocky Mountain flora, and a large number of woods of the United States. An extensive collection of grains represents the produce of Utah and other states. Contributions of fossils, ores, animals, relics, or other material of value to the museums, will be highly appreciated. All gifts are labeled and preserved, and the name of the donor is kept on record.

THE ART ROOMS contain many valuable casts, most of which are reproductions of the works of the masters, together with many smaller casts suitable for the more simple work in drawing. A few reproductions of the paintings of the masters, and charts to be used in the work in design are in the equipment; also tables, drawing boards and cases necessary for the work.

THE LIBRARY, with its offices and reading room, occupies the entire front of the second floor of the Main Building. The large, well-lighted reading room is comfortably furnished. The books are shelved on the Library Bureau standard steel stacks, arranged in alcoves, where tables also are provided for those wishing to do special study. The readers have free access to the shelves.

The library now contains about 18,000 bound volumes and a large number of pamphlets. The books are classified by the Dewey decimal system, and there is a complete dictionary card catalogue of the library. The shelf list is also on cards, and forms a classed catalogue for official use.

The library is a depository for United States public documents, and receives substantially all documents printed by the government. There are ninety-two periodicals on the subscription



list, besides about eighty which are received as exchanges for the publications of the College and of the Experiment Station. Thirty-five newspapers of the state are regularly received and placed on file in the reading room.

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## THE AGRICULTURAL EXPERIMENT STATION.

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THE AGRICULTURAL EXPERIMENT STATION is a department of the College, supported by Congressional appropriations, supplemented by the receipts from the sales of farm products, and by such appropriations as the State Legislature makes from time to time to carry out special lines of work, or for the establishment and support of sub-stations. The station was created for the special purpose of discovering new truths that may be applied in agriculture, and of making new applications of well-established laws. It is, therefore, essentially a department devoted to research; and as such, it does the most advanced work of the College.

THE EXPERIMENT STATION is not, in the ordinary sense, an institution where model farming is carried on. It has a much higher purpose. The practices of the farmer are subjected to scientific tests, in order to determine why one is bad and the other good. Acting on the suggestions thus obtained, new lines of investigation are begun, with the hope that truths of great value to the farmer may be discovered.

The Station has for its present object the study of the underlying laws of irrigation. On the farm, in the orchards, gardens, and barns, experiments are going on that, in time, will lead to the establishment of an art of irrigation based on laws developed by scientific methods. Experiments for the improvement of alfalfa for hay and seed, of sugar beets in sugar content and seed production, and of Potatoes in yield and in quality, are being un-

dertaken. Special investigations for the purpose of encouraging the horticultural, dairy, and poultry industries, and of reclaiming the alkali and arid lands of the state are also in progress.

By an act of the State Legislature of 1903, six experimental farms have been established in different parts of the state, for the purpose of demonstrating the possibilities of dry or arid farming on the soils of Utah. Another act, passed in 1905, established a central experimental farm, which has been located in Utah county. The work on all these sub-stations, including also the Experimental farm near St. George, in Washington County, is placed under the direction of the Experiment Station. In co-operation with the Department of Agriculture, the Station is carrying on extensive investigations in irrigation, drainage, sugar beet seed production, and alkali land reclamation.

A report and four or five bulletins containing the results of the experiments of the stations are published annually for free distribution among the people of the state.

The Experiment Station has a high educational value. Nearly all the members of the Station Staff are also members of the College Faculty, and the students, therefore, receive at first hand an account of the methods and results of the work of the Station, and training in their application. The opportunities that the Experiment Station offers for advanced work in several branches of science are of great importance. The scientific method and spirit characterize all the operations of the Station, and none can fail to be benefited by a study of the experiments that go on at all times of the year.

The Station Staff are always glad to assist the advanced students of the institution in any investigation they may wish to undertake.

## ADMISSION AND GRADUATION.

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CONDITIONS FOR ADMISSION. Graduates of the district schools are admitted without examination to the College Preparatory Course, to the high school courses and to the Manual Training Courses. Candidates for admission must be at least fifteen years of age. Persons eighteen years old or over, not graduated from the district schools, will be admitted to the technical work of the Manual Training courses prior to June, 1910, after which time students who cannot show either by certificate or examination that they have completed the work of the eighth grade of the district school will not be admitted to these courses. Until June, 1910, classes in the elementary branches will be maintained in order that the students referred to above may make up the regular entrance requirements.

Those who have completed the College Preparatory Course are admitted without examination to the four-year College courses in Agriculture, Domestic Science, Commerce and General Science. Students may transfer from one regular course to another by making up all the technical work not completed of the course to which they transfer. No one is allowed to substitute technical work on one course for that of another except by permission of the Faculty.

Other students are admitted to any of the courses leading to degrees upon the certificates of accredited high schools, or upon satisfactory examination in the required subjects. For a description of these subjects, see the courses outlined, pp. 40-56. Students entering from other schools may be allowed to substitute for some of the required subjects.

Beginning with 1912-1913 the College will require three years of high school work before admitting any student to the four-year college courses. Students entering the college courses from other schools in that year must show credits for three years work in some reputable high school. Students who begin

their high school work as first year students at the college in 1909-10 will take second-year work in 1910-11, and third-year work in 1911-12, becoming freshmen in 1912-13.

Candidates for admission to advanced standing may be required to pass satisfactory examinations in all the work of the preceding years, or to present satisfactory evidence of having completed an equivalent of such work in some other school or college.

**SPECIAL STUDENTS.** Persons of mature years, who for satisfactory reasons desire to pursue a special line of study, may be admitted as special students, provided they give evidence of ability to do the work desired. Special students may be allowed to graduate in any of the courses, on condition that they complete the required work and pass the necessary examinations.

**REGISTRATION.** All students register at the beginning of the collegiate year for the work of the whole year. Changes in registration, and credit for work not registered, will be allowed only by special permission of the Council.

**CLASSIFICATION.** All regular students are classified as first, second, and third year students in Agriculture, Domestic Science, or Commerce; or as first, second, and third year students in the College Preparatory Course; or as first, second, third, and fourth year students in the Manual Training Course in Mechanic Arts; or as freshman, sophomore, junior, and senior students in any of the four-year courses leading to degrees.

**GRADUATION.** Students who complete the three-year courses in Agriculture, or Commerce, or the four-year course in Manual Training in Mechanic Arts, or the three-year course in Manual Training in Domestic Science receive certificates of graduation. The degrees of Bachelor of Science, Bachelor of Science in Agriculture, Bachelor of Science in Domestic Science, and Bachelor of Science in Commerce, are conferred upon those who complete the regular four-year courses in General Science, Agriculture, Domestic Science, and Commerce, respectively.

To obtain a degree the student must have been in attendance

at least one school year preceding the conferring of the degree. He must have completed all the prescribed work or its equivalent in one of the four-year college schedules. He must have acquired credits for electives according to the grade and number indicated in his schedule. He may be required to pass a satisfactory oral examination on the technical work of his course before a special committee appointed by the president. He must have no grade lower than D in any subject. Four-fifths of all his term grades must be C or better. He must have discharged all College fees. He must be recommended for graduation by his school faculty and receive the favorable vote of two-thirds of the members of the College Council.

In order to encourage high scholarship the College Council has instituted a College Roll containing the names of all students doing excellent work. This roll is divided into two groups, the first containing the names of those who have A or B in all their work, the second composed of students having A or B with one C.

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## STUDENT ACTIVITIES.

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**THE STUDENT BODY ORGANIZATION.** This society embraces all the students of the institution. Its prime object is to foster a proper spirit of college loyalty. It also secures dispatch and efficiency, as well as uniformity, in the administration of all matters pertaining to the entire student body. Realizing the importance to all students of taking part in the various college activities, the organization further provides each member with the maximum amount of proper athletic, theatrical and social recreation at the minimum expense, viz., \$5.00 annually. This society has control of the following student activities:

1. *Athletics*, including all inter-class and inter-collegiate contests in football, base ball, basket ball, and track events.
2. *Music*, including all public performances of the Band,



the Orchestra, Glee Club, Choir, String Quartette, and Mandolin and Guitar Club.

3. *Theatricals*. Once or twice each season some dramatic performance is given. In the past, three of Shakspeare's comedies, Goldsmith's *She Stoops to Conquer*, and Gilbert's *Pygmalion and Galatea* have been presented.

4. *Debating*. Each year two or more intercollegiate debates occur. In addition there are several debating societies organized by the different classes.

5. *Student Publications*. The students of the College publish a school paper, *Student Life*, which makes its appearance once a week and contains timely editorials, news items, announcements, reports and forecasts of College activities. In addition, several magazine numbers of *Student Life* are published during the school year.

In 1908-9 the juniors inaugurated the plan of publishing a College Year Book, which they christened *The Buzzer*. It was eminently successful, and already the 1909-10 juniors are collecting material for the second volume.

CLUBS. Not affiliated with the Student Body Organizations, and standing largely for the interests of the various schools, are the following clubs:

1. *The Agricultural Club*, which aims to keep its members in touch with current events in scientific agriculture. Special lectures, often illustrated, are given at intervals throughout the season.

2. *The Home Seeker's Circle*, an association of the instructors and students in the school of Domestic Science and Arts, having for its special object the dignifying of home work.

3. *The Commercial Club*, working to promote the interests of the Commercial School, to popularize the commercial courses, and to consider matters of interest not encountered in routine work. The club maintains an annual lecture course, given by prominent men throughout the state on topics of special inter-



est to the business man. All commercial students are eligible to membership.

4. *The Delta Theta Sigma*, a chapter of the recently establish national honorary fraternity for students in Agriculture. Members are chosen for scholarship, being selected from among the upper two-fifths of the junior and of the senior classes in Agriculture.

SORORITIES AND FRATERNITIES. The following societies of limited membership are in active existence among the students:

1. *The Sorosis*, open to college women only, and having for its object general literary and social culture, as well as the advancement of college loyalty.

2. *The Blue T.*, a society of high school girls, striving to promote sociability and college spirit among the preparatory students.

3. *The Sigma Alpha Fraternity*, open to college men and having for its object social and intellectual progress.

4. *The Pi Zeta Pi Fraternity*, open to college men. Its aims are to promote college loyalty, social and intellectual advancement.

5. *The Helicon*, a literary society giving its members opportunity to study such authors as are not reached by the required courses in English. The society holds weekly meetings and membership is open to all students.

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### STUDENTS' EXPENSES.

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Tuition is free. Utah students pay an annual entrance fee of \$5. Students from other States must pay \$25. The privileges of the library and museums are free. In the laboratories, workshops, cooking-rooms, and in typewriting, students are charged an incidental fee of \$1 per credit hour. The total amount varies in each case in accordance with the course taken, ranging from \$2.00 to \$13.00 a year.

Every regular student must pay a Student Body fee of \$5.00,

for which a ticket is issued admitting him to all the activities controlled by the Student Body Organization,—athletic events, foot-ball, basket-ball, base-ball, and track, dramatic and musical entertainments, socials, lectures, etc. This system has been found to be a great saving to the students and a most excellent means of fostering proper interest in student activities.

*All the boys above first year and below senior must be prepared to purchase a uniform to wear at military drill.* To this rule there is *no exception* unless a very unusual reason exists. This uniform is obtained through the Secretary of the College at actual cost, about \$15.00, and has been found more serviceable and far more attractive in appearance than civilian clothes of the same price. With proper care one uniform will last two years.

All students in Domestic Science must provide themselves with four white bib aprons and four pairs of half-sleeves. The total cost varies from \$3.50 to \$4.00.

All girls taking physical culture must provide themselves with a gymnasium suit and gymnasium shoes. These may be procured at the College. Cost, about \$3.50.

The fee charged for a certificate of graduation is \$2.50; and for a diploma, \$5.00. Students are held responsible for any injury done by them to the College property.

Good board and rooms can be obtained in private houses for \$3.50 to \$4.50 per week. By renting rooms and boarding themselves, students are able to reduce the cost of room and board to less than \$2.50 per week. The College maintains a lunch counter where, for a few cents, students may get hot luncheons daily.

The cost of necessary books and stationery ranges from \$10.00 to \$15.00 a year.

## Schools and Courses of Study.

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For the purpose of more efficient administration, the College is divided into five schools: (1) The school of Agriculture; (2) The School of Domestic Science and Arts; (3) The School of Commerce; (4) The School of Mechanic Arts, and (5) The School of General Science. These schools are not educationally separate, but are interdependent and together form a unit.

*The School of Agriculture* offers (1) A three-year Manual Training Course in Agriculture; (2) Four-year college courses in Agronomy, Horticulture and Entomology, Animal Husbandry and Dairying, Irrigation and Drainage. Veterinary Science, and Forestry. In addition a course in Irrigation Engineering is offered jointly by the Agricultural College and the State School of Mines. The aim of this course is to prepare young men for one of the most important branches of engineering work in the West.

*The School of Domestic Science and Arts* offers (1) A three-year Manual Training Course in Domestic Science; (2) A four-year college course in Domestic Science.

*The School of Commerce* offers (1) A three-year high school course in Commerce; (2) A four-year college course in Commerce.

*The School of Mechanic Arts* offers a four-year course in Manual Training in Mechanic Arts, which may lead to carpentry, forging, machine work, or other trades.

*The School of General Science* offers (1) a three-year college Preparatory Course; (2) a four-year college course in General Science. Upon completion of the College Preparatory Course a student may enter any one of the four-year courses leading to a degree.

All college courses lead to the degree of Bachelor of Science; all other courses, to certificates.

## THE SCHOOL OF AGRICULTURE.

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The instruction in Agriculture is provided by the departments of Agronomy, Irrigation and Drainage, Animal Husbandry, Dairy Husbandry, Horticulture, Entomology, and Veterinary Science. The courses of these departments are so arranged as to enable the student to lay a foundation upon which he can build a successful career as a farmer, or develop into a specialist in Agronomy, Animal Industry and Dairying, Entomology, Horticulture, Irrigation, or Veterinary Science. For the student who expects to return to the farm, a Manual Training Course, continuing through three years, has been arranged; and a college course, leading to a degree, is offered for those who desire to secure positions as farm managers, experts in the State or Government employ, or as workers in agricultural faculties and in experiment stations. The three-year course confines itself to laying a foundation that will secure success on the farm; the longer course enables the student to direct his efforts along the special lines in which he is most interested.

In the junior and senior years the student is required to specialize in Agronomy, in Irrigation and Drainage, in Animal Husbandry and Dairying, or in Horticulture and Entomology.

Experience has shown that practically all of the students who take this course come from the farm, and it is assumed that they are acquainted with the various manual operations of farm work. The design of the course is, therefore, to teach the sciences that underlie practical agriculture, and sufficient supplementary studies to develop the agricultural students to the intellectual level of the educated in other professions.

The general and department libraries enable the student to become acquainted with a wide range of agricultural and related literature, while the laboratories of the College; and the Experiment Station afford opportunity for training and experience that it would be impossible to get from books.

Agriculture is one of the most promising of modern professions. It is growing very rapidly, and, owing to the scientific foundation that recent years have given it, large numbers of intelligent people are adopting it as their means of livelihood. The new agriculture is not a profession of unceasing toil. On the contrary, the freedom, health, intellectual activity and profit to be obtained from intelligent farming are attracting the best classes of people. Utah and other Western States are offering splendid opportunities to those who prepare themselves for scientific farming. There is a great demand for men who can supervise large farm enterprises; there is a greater demand for men who can act as experts, experimenters or teachers in the schools and other institutions of the State and National Government. The supply of such men does not begin to equal the demand. Every graduate of the School of Agriculture of the Agricultural College is splendidly placed; and a large number of the graduates of the other schools have later entered the work in agriculture.

Students who complete the Manual Training Course in Agriculture receive certificates of graduation. The first two years of all college courses in Agriculture are alike. At the beginning of the junior year the student must choose the subject in which he desires to specialize. Every college course leads to the degree of Bachelor of Science in Agriculture.



## MANUAL TRAINING COURSE IN AGRICULTURE.

	First Year.	1st Term	2nd Term
English 4 .....	5	5	5
Mathematics 2 .....	5	5	5
Art 1 .....	2	2	2
Carpentry 5 .....	2	0	0
Forging 4b .....	0	2	2
Animal Husbandry 1 .. }	4	4	4
Elementary Agriculture }			
	—	—	—
	18	18	18

## Second Year.

English 5 .....	5	5	5
History 2 .....	3	3	3
Zoology 1 .....	2	2	2
Drill .....	1	1	1
Entomology 1 .....	2	2	2
Botany 2 .....	3	3	3
Irrigation 1 .....			
Veterinary Science 1 }			
Poultry Husbandry 1.... }	2	2	2
Elementary Horticulture }			
	—	—	—
	18	18	18

## Third Year.

English 6 .....	3	3	3
Drill .....	1	1	1
Chemistry 1 .....	5	5	5
*Electives .....	10	10	10
	—	—	—
	19	19	19

## ELECTIVES.\*

Dairying 1.....	3	Agricultural Technology 3 ..	3
Animal Husbandry 7.....	3	Animal Husbandry 2 .....	3
Agronomy 1.....	4	Agronomy 3 .....	3
Horticulture 1.....	3	Horticulture 2 .....	4
Dairying 2.....	2	Irrigation 3 .....	3
Dairying 3.....	2		

\*The students will, with the advice of the Agricultural Committee, select the ten elective hours from the courses named.

**COLLEGE COURSES IN AGRICULTURE.**

Freshman Year.		1st Term	2nd Term
English 6 .....		3	3
Mathematics 4 .....		5	5
Chemistry 1 .....		5	5
Botany 3, 4.....		3	3
Drill .....		1	1
Library Work .....		1	1
		<u>18</u>	<u>18</u>

Sophomore Year.			
Physics 1 .....		3	3
Chemistry 3 .....		3	3
Zoology 2 .....		3	3
German 1 or French 1 .....		4	4
Drill .....		1	1
Agronomy 3 .....		0	3
Horticulture 1 .....		3	0
Agricultural Technology 8 .....		2	2
		<u>19</u>	<u>19</u>

**AGRONOMY.**

Junior Year.			
English 7 .....		3	3
German 2 or French 2 .....		3	3
Drill .....		1	1
Agronomy 1 .....		4	0
Agronomy 2 .....		3	0
Chemistry 5 .....		0	3
Bacteriology 1 .....		3	0
Electives .....		0	7
		<u>17</u>	<u>17</u>

Senior Year.			
Geology 2 .....		3	3
Economics 2 .....		3	3
Horticulture 3 .....		4	0
Botany 5 .....		0	3
Agronomy 4 .....		3	0
Agricultural Technology 3 .....		0	3
Agricultural Technology 4.....		3	0
Agronomy 7 .....		0	5
Elective .....		1	0
		<u>17</u>	<u>17</u>

**ANIMAL HUSBANDRY AND DAIRYING.**

	Junior Year.	1st Term	2nd Term
English 7 .....		3	3
German 2 or French 2 .....		3	3
Animal Husbandry 3 .....		5	0
Poultry Husbandry 1 .....		0	2
Bacteriology 1 .....		3	0
Zoology 3 or 6 .....		0	3
Dairying 1 .....		3	3
Animal Husbandry 2 .....		0	3
Drill .....		1	1
		<hr/> 18	<hr/> 18

	Senior Year.		
Economics 2 .....		3	3
Animal Husbandry 4 .....		3	0
Dairying 3 .....		0	3
Chemistry 6 .....		3	3
Geology 2 .....		3	3
Electives .....		5	5
		<hr/> 17	<hr/> 17

**HORTICULTURE AND ENTOMOLOGY.**

	Junior Year.	1st Term	2nd Term
English 7 .....		3	3
German 2 or French 2 .....		3	3
Drill .....		1	1
Entomology 2 .....		3	3
Bacteriology 1 .....		3	0
Horticulture 2 .....		0	4
Botany 5 .....		0	3
Electives .....		4	0
		<hr/> 17	<hr/> 17

	Senior Year.		
Economics 2 .....		3	3
Geology 2 .....		3	3
Horticulture 3, 4 .....		4	4
Chemistry 5 .....		0	3
Electives .....		7	4
		<hr/> 17	<hr/> 17

# IRRIGATION AND DRAINAGE.

	Junior Year.	1st Term	2nd Term
English 7 .....	3	3	3
German 2 or French 2 .....	3	3	3
Mathematics 5 .....	5	5	5
Irrigation 2 .....	3	3	3
Irrigation 5 .....	3	0	0
Irrigation 3 .....	0	3	3
Drill .....	1	1	1
	<hr/>	<hr/>	<hr/>
	18	18	18

	Senior Year.		
Agricultural Technology 4 .....	3	0	0
Agricultural Technology 3 .....	0	3	3
Agricultural Technology 5 .....	5	5	5
Irrigation 6 .....	3	3	3
Geology 2 .....	3	3	3
Economics 2 .....	3	3	3
	<hr/>	<hr/>	<hr/>
	17	17	17

Graduates from the course in Irrigation and Drainage will be admitted without examination to the Junior Year of the Irrigation Engineering course offered jointly by the University of Utah and the Agricultural College. The last two years, in which the technical irrigation work will be done, are spent at the University of Utah, and are as follows:\*

	Junior Year.		
Drawing 3 .....	2	2	2
Electrical Engineering 4a .....	3	3	3
Engineering 3 .....	4	4	4
Engineering 4a, 4b .....	1	1	1
Engineering 5 .....	4	0	0
Engineering 9a .....	0	2	2
Surveying 1a, 1b, 4 .....	3	5	5
	<hr/>	<hr/>	<hr/>
	17	17	17

\*For a description of courses see University Catalogue for 1909-10.

## Summer.

Surveying 2 .....Six Weeks

## Senior Year.

Engineering 2a .....	3 .....	0
Engineering 6 .....	4 .....	0
Engineering 7 .....	3 .....	0
Engineering 9b .....	2 .....	0
Engineering 10, 11, 12, 13 .....	0 .....	8
Engineering 14a .....	2 .....	0
Engineering 14b, 14c .....	0 .....	5
Engineering 18 .....	0 .....	2
Mining 1 .....	3 .....	0
Thesis .....	0 .....	2
	<hr/>	<hr/>
	17	17

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**FORESTRY.**

The United States Forestry Service and the College offer conjointly a winter course for forest rangers. This course, which lasts three months and gives special training in silviculture, surveying, mensuration, topographical drawing, etc., is fully described in the Winter Course Circular, a copy of which will be sent on application.

The growing demand for trained Western rangers and foresters makes this course especially significant. Those students who wish to enter a school of forestry should prepare themselves by taking courses either in the School of Agriculture or in the School of General Science. By proper selection in either of these they may obtain a very efficient preparation for the work in forestry.



## THE SCHOOL OF DOMESTIC SCIENCE AND ARTS.

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The courses in Domestic Science and Arts aim to train and broaden the minds of women, and to enable them to meet more intelligently the home demands of modern life. When woman has learned to apply the principles of science to the problems of daily living, she will realize that housekeeping is an occupation worthy of the best efforts of the brightest minds, and that the broadest courses in science, economics, and ethics can be applied to the betterment of home life. Formerly the higher education of woman led her away from the practical interests of the home. The recent establishment of Domestic Science courses in many leading colleges and universities shows a public demand for education toward home life rather than away from it. The State of Utah wisely established such courses when this College was first organized; and the favor with which the work has been received by the public shows the wisdom of the plans. The Domestic Science Course has been strengthened and improved each year, and better facilities for instruction and study have been provided. The four-year course gives the same training in mathematics, in English, and in science as other baccalaureate courses, together with a broader culture in literature and modern languages than is offered in any other. Both in the preliminary work and in the advanced years, special studies in the various lines of home science are prescribed in logical order as the distinctive feature of the course. The Manual Training Course in Domestic Arts is offered for the benefit of young women who do not wish to take the studies of the regular college years, but desire to devote more time to the subjects of special interest to women.

Two courses are offered; a three-year Manual Training Course, leading to a certificate, and a four-year college course, leading to the degree of Bachelor of Science in Domestic Science. The regular foundation for the latter is the College Preparatory Course.

## MANUAL TRAINING COURSE IN DOMESTIC SCIENCE.

### First Year.

	1st Term	2nd Term
English 4 .....	5	5
Domestic Science 1 .....	2	2
Sewing 1, 2 .....	3	3
Art 2 .....	2	2
Mathematics 2 .....	5	5
Physical Education .....	1	1
	<hr/> 18	<hr/> 18

### Second Year.

English 5 .....	5	5
Domestic Science 2, 3 .....	3	3
Sewing 3, 4 .....	3	3
Art 4 .....	3	0
Botany 2 .....	0	3
Zoology 1 .....	2	2
Physical Education .....	1	1
	<hr/> 17	<hr/> 17

### Third Year.

English 6 .....	3	3
Domestic Science 4, 5, 6 .....	3	3
Sewing 5, 6 .....	3	3
Chemistry 1 .....	5	5
History 2 .....	3	3
	<hr/> 17	<hr/> 17

# COLLEGE COURSE IN DOMESTIC SCIENCE.

## Freshman Year.

	1st Term	2nd Term
English 6 .....	3	3
Domestic Science 4, 5, 6 .....	3	3
Mathematics 4 .....	5	5
Chemistry 1 .....	5	5
Zoology 2 .....	3	3
	<hr/> 19	<hr/> 19

## Sophomore Year.

English 7 .....	3	3
Domestic Science 7, 8 .....	3	3
Domestic Science 9 .....	0	3
German 1 or French 1 .....	4	4
Physics 1 .....	3	3
Chemistry 2, 4 .....	3	3
Bacteriology .....	3	0
	<hr/> 19	<hr/> 19

## Junior Year.

Domestic Science 10 .....	3	3
Domestic Science 11 .....	3	0
Sewing 11, 12 .....	2	2
German 2 or French 2 .....	3	3
Botany 3, 4 .....	3	3
Chemistry 7 .....	0	3
Electives .....	3	3
	<hr/> 17	<hr/> 17

## Senior Year.

Domestic Science 12 .....	3	3
Domestic Science 13 .....	3	3
Economics or Sociology .....	3	3
Geology 2 .....	3	3
Electives .....	5	5
	<hr/> 17	<hr/> 17

## THE SCHOOL OF COMMERCE.

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The purpose of the School of Commerce is to give opportunity for a liberal education with special emphasis upon the commercial phases of life. Persons who complete the Commercial courses should be better prepared to assume leadership and responsibility in business and in the various industries and professions. Two courses are offered: one of three years, leading to a certificate of graduation; the other of four years, leading to the degree of Bachelor of Science in Commerce. Students in the three-year course may receive a certificate in Accounting, or in Stenography. Those who have finished the three-year course are admitted to the sophomore year as candidates for degrees. The work of the senior year is, to a great extent, elective. The student may select as his major (1) Political Economy, (2) Political Science, or (3) Accounting and Administration. His plan must be approved by the principal of the School of Commerce.

For those who expect to enter the profession of law, the Commercial courses afford excellent preparation. Students who complete these courses will be well prepared for positions as teachers in commercial schools. The demand for thoroughly qualified teachers for such positions is greater than the supply, and many desirable positions are open to those prepared to do the work.

# SHORT COURSE IN COMMERCE.

## First Year.

	1st Term	2nd Term
English 4 .....	5	5
Mathematics 2 .....	0	5
Business Correspondence and Spelling .....	5	0
Commercial Arithmetic .....	5	5
*Government 1 .....	3	3
Penmanship .....	1	1
	<hr/> 19	<hr/> 19

## Second Year.

English 5 .....	5	5
Mathematics 3 .....	5	5
Accounting 1 and 2 or Stenography 1 .....	5	5
Zoology 1 .....	2	2
Typewriting 1 .....	1	1
Drill .....	1	1
	<hr/> 19	<hr/> 19

## Third Year.

English 6 .....	3	3
Economics 1, 8, 11 .....	9	9
Accounting 3 or Stenography 2 .....	5	5
Typewriting .....	1	1
Drill .....	1	1
	<hr/> 19	<hr/> 19

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\*Agricultural or Domestic subjects may be substituted for this subject.



## COLLEGE COURSE IN COMMERCE.

## Freshman Year.

	1st Term	2nd Term
English 6 .....	3 .....	3
Mathematics 4 .....	5 .....	5
Economics 11 .....	3 .....	3
Economics 1 .....	3 .....	3
Accounting and Administration 3 or } .....	3 .....	3
Stenography 2 .....		
Drill .....	1 .....	1
	<hr/> 18	<hr/> 18

## Sophomore Year.

Chemistry 1 .....	5 .....	5
Physics 1 .....	3 .....	3
Spanish .....	3 .....	3
Economic and Commercial Geography .....	3 .....	3
Zoology 2 .....	3 .....	0
Botany 2 .....	0 .....	3
Drill .....	1 .....	1
	<hr/> 18	<hr/> 18

## Junior Year.

English 7 .....	3 .....	3
German 1 or French 1 .....	4 .....	4
Economics 5 .....	3 .....	3
History 4 .....	3 .....	3
Economics 6 .....	3 .....	3
Economics 9 .....	2 .....	2
Drill .....	1 .....	1
	<hr/> 19	<hr/> 19

## Senior Year.

Geology 2 .....	3 .....	3
German 2 or French 2 .....	3 .....	3
Economics 10 .....	3 .....	0
Political Science 3 .....	0 .....	3
Economics 15 .....	3 .....	3
Electives .....	5 .....	5
	<hr/> 17	<hr/> 17

## THE SCHOOL OF MECHANIC ARTS.

The course in Mechanic Arts is intended to qualify students as artisans, hence the practical work of the shops and draughting room is emphasized. The course admits of a three-fold specialization—in woodcraft, forging, or machine work in metals, with special courses in foundry practice, horse-shoeing, carriage building, cabinet making, sloyd, etc. In this work are developed correct methods of using tools and doing the mechanic's work neatly, efficiently and with rigid accuracy. In all departments of the school, work is done from series of shop drawings, arranged in progressive order, giving both the details of the exercise and a drawing of the finished product. Sufficient work is given in English, mathematics, and elementary science to represent a fair high school education. Students electing any branch of the Mechanic Arts Course are required to do at least two years' work in that branch. No machine work is given until the student has shown a reasonable proficiency with hand tools. All products of the shop are the property of the department, students being allowed to take away specimens of their work only by special permission.

The trades have changed greatly in recent years. Science has given them a secure foundation and the wages of artisans have advanced so rapidly as to make the trades desirable as means of livelihood. The lack of skilled artisans should encourage many boys to go into this kind of life work. Moreover, work offered by this school is an unusually good preparation for engineering.

Upon completion of the four-year Manual Training Course, students receive certificates of graduation.

**MANUAL TRAINING COURSE IN MECHANIC ARTS.****First Year.**

	1st Term	2nd Term
English 4 .....	5	5
Mathematics 2 .....	5	5
Art 3 .....	3	3
Shop Work .....	5	5
	<hr/>	<hr/>
	18	18

**Second Year.**

English 5 .....	5	5
Mathematics 3 .....	5	5
Government 1 .....	3	3
Shop Work .....	5	5
Drill .....	1	1
	<hr/>	<hr/>
	19	19

**Third Year.**

English 6 .....	3	3
Mathematics 4 .....	5	5
Mechanical Drawing 1a .....	3	3
Zoology 1 .....	2	2
Shop Work .....	5	5
Drill .....	1	1
	<hr/>	<hr/>
	19	19

**Fourth Year.**

Chemistry 1 .....	5	5
Physics 1 .....	3	3
Mechanical Drawing 1b .....	3	3
Technology 1 .....	2	2
Shop Work .....	5	5
Drill .....	1	1
	<hr/>	<hr/>
	19	19

## THE SCHOOL OF GENERAL SCIENCE.

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To carry out the work of the several technical schools of the College, an efficient instructing force and a complete modern equipment have been provided in the natural and physical sciences, as well as in mathematics, history, language, etc. This makes it possible to satisfy the growing demand for strong baccalaureate courses affording a broad general education in the earlier years, and admitting of specialization later, when the student has matured his plans. Such courses constitute the work of the School of General Science, and, paralleling the other degree courses of the College, lead to the degree of Bachelor of Science. The natural introduction to this work is the College Preparatory Course.

Upon completion of four years' work in General Science, students receive the degree of Bachelor of Science in General Science.

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## COLLEGE COURSE IN GENERAL SCIENCE.

### Freshman Year.

	1st Term	2nd Term
English 6 .....	3	3
Mathematics 4 .....	5	5
Physics 1 .....	3	3
Chemistry 1 .....	5	5
Library Work .....	1	1
Drill .....	1	1
	<hr/> 18	<hr/> 18

All of the work of the sophomore, junior, and senior years, *except Military drill*, is elective; but students are required to complete two years' work in modern languages, and to take an equivalent of five hours through one year in English, of three hours in economics, and of four and one-half hours in zoology and botany. With these restrictions, the whole field of college work lies open, with the understanding that the student will select some one major subject to which to direct his attention, and will group related courses around this, under the direction of the department in which he specializes. For convenience, the subjects offered have been grouped as below, and the requirement is that above the freshman year the student shall complete ten hours of his work in his major subjects, ten hours in subjects found in the same group, and the remainder as he may elect. For graduation, eighteen hours are required in the freshman and sophomore years, and the equivalent of seventeen hours through each of the following years. A subject marked \* below cannot become a major in the General Science Course; and as required collateral work, the strictly technical studies are excluded.

### *Science Group.*

*Soil Physics.	*Animal Husbandry.	Chemistry.
Zoology and Entomology	*Agronomy.	Botany.
Geology and Mineralogy.	*Domestic Science.	*Horticulture.

### *Mathematical Group.*

Mathematics.	Physics.	Chemistry.
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### *Literary Group.*

English.	*Political Economy.	*Political Science.
History.	Languages.	*Commerce.



# COLLEGE PREPARATORY COURSE.

This course is designed for those who wish to prepare for a college course here or elsewhere. Students who complete it are admitted to the Freshman year in Agriculture, Domestic Science, Commerce, or General Science.

## First Year.

	1st Term	2nd Term
English 4 .....	5	5
Mathematics 2 .....	5	5
History 2 .....	3	3
Art 1 .....	2	2
Optionals .....	4	4
	<hr/> 19	<hr/> 19

## OPTIONALS.

### *Agriculture.*

Animal Husbandry 1... }		
Elementary Agriculture }	4	4

### *Domestic Science.*

Domestic Science 1 .....	2	2
Sewing 7 .....	2	2

Students in Commerce or General Science elect any of the above optionals. *All girls must take Physical Education.*

## Second Year.

English 5 .....	5	5
Mathematics 3 .....	5	5
Zoology 1 .....	2	2
Botany 2 .....	0	3
Drill .....	1	1
Optionals .....	6	3
	<hr/> 19	<hr/> 19

## OPTIONALS.

	1st Term	2nd Term
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*Agriculture.*

Entomology 1 .....	}	6	3
Irrigation 1 .....			
Veterinary Science 1..			

*Domestic Science.*

Sewing 3, 4 .....	3	3
Art 3 .....	3	0

*Commerce.*

History 1 or Modern Languages .....	3	3
Physiography .....	3	0

*General Science.\**

Modern Languages .....	4	4
History 1 .....	3	3
Entomology 1 (either term) .....	3	3
Botany 2 .....	0	3

## Third Year.

English 6 .....	3	3
German 1 or French 1 .....	4	4
Physics 1 .....	3	3
Drill .....	1	1
Electives .....	6	6
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\*In this course Botany 2 is an optional. Students must elect six hours throughout the year.

# Departments of Instruction.

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## AGRICULTURE.

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PROFESSOR BALL.  
PROFESSOR NORTHROP.  
PROFESSOR FREDERICK.  
PROFESSOR JENSEN.  
PROFESSOR HOGENSON.  
PROFESSOR GOODWIN.  
PROFESSOR TITUS.  
PROFESSOR CAINE.  
PROFESSOR WEST.  
ASSISTANT PROFESSOR WOODWARD.

## ELEMENTARY AGRICULTURE.

This course is devoted to the study of such fundamental questions as: How crops grow, the soil and its elements of plant food, irrigation and the movement of water in the soil and plant, individual crops, etc. The object is to get a general insight into the subject of agriculture and thus build a foundation for future work. A number of simple yet fundamental experiments with soils and plants are carried on by the students. Four hours, one term.

## AGRONOMY.

1. SOILS. Lectures and recitations on the origin, formation, distribution, character, function and classification of soils; the sources and action of plant foods; alkali soils, the soil water and its movement; soil texture and its maintenance; renovation of worn out soils; the soil atmosphere; the temperature and proper

management of the soil ; adaptation of soils and crops. A number of experiments illustrating the various points discussed are performed by the students in the laboratory. Fletcher, *Soils*, and King, *The Soil*, are used as reference and text books. Four hours, first term.

2. SOIL PHYSICS. This course includes a thorough study of the total moisture in soils and crops ; the capillary rise of water in different soils and plants under different conditions ; osmosis and diffusion as affected by cultivation, cropping and mulching ; the hygroscopic moisture and its effect upon the water yielding power of soils to plants ; the action of lime on soils and plants ; the determination of the apparent and absolute specific gravity of soils ; the power of loose and compact soils to retain moisture ; the rate of percolation of water and air through soils ; the effect of subsoiling and various methods of tillage on soil moisture and crop growth ; the effect of varying depths of mulches, both natural and artificial, upon the conservation of soil moisture ; the determination of organic matter in soils and its loss by cropping ; the adhesiveness of soils ; the effective diameters of soil grains in various types of soils and their relation to plant production ; and the manurial requirements of soils as determined by plant growth. These are some of the problems that are discussed in the class room and demonstrated by experiments in the laboratory. King, *Agricultural Physics*. Two laboratory periods and one recitation, first term. Three credits.

3. FARM CROPS. Lectures, recitations and laboratory work on the history, production, cultivation and general management of crops, including cereals, grasses, legumes and root crops ; the root, stem and leaf development ; the improving and adapting of plants to particular needs ; systems of rotation and the composition, care and uses of various crops. A number of practicums and tests with different seeds and plants are performed by the students in the laboratory. A seminary of two hours is held every two weeks, where students report on special topics, previously arranged, bearing upon particular crops, their history, development, culture,

diseases and uses. These seminars alternate with the laboratory work. Hunt, *Cereals in America* and *Forage and Fiber Crops*. Three hours, second term.

4. ARID FARMING. In this course instruction is given in the methods best adapted to the growing of profitable crops on arid lands; the treatment of the soil, including the conservation of moisture by deep and fall plowing, mulching, etc.; the soils and crops best adapted to arid farming. The experiments being carried on at the different arid experimental farms in the State are discussed, together with other problems which confront the arid farmer of today. Three hours, first term.

5. MANURES AND AGRONOMICAL BACTERIOLOGY. Students become familiar with the various natural and artificial manures best suited for different crops, their composition, economical use and influence upon the soil and crop. The care and preservation of manures is discussed. The manurial requirements of different soils are studied by means of plat work on the farm and pot or basket cultures in the plant house. Aikman, *Manures and Manuring*, is used as a reference book. The bacteria which affect soil fertility, including the nitrifying and denitrifying organisms, the nodule-forming bacteria of legumes, are discussed in the class room and experimented with in the laboratory. Elective. Three hours, one term.

6. HISTORY OF AGRICULTURE; FARM MANAGEMENT. A series of lectures covering the general progress of agriculture in those nations which have contributed most to agricultural development; the various systems of farming; the economic use of labor and machinery; harvesting and disposing of crops; and other problems of the farm. Card, *Farm Management*. Elective. Three hours, one term.

7. INVESTIGATION AND EXPERIMENTATION. A study of the history, organization and work of the U. S. Department of Agriculture and Experiment Stations. Students become familiar with the experimenters and agricultural literature of this and other countries. Abstracts are made of a number of bulletins, bearing



on various lines of work. An original experiment is outlined, brought before the class for criticism and suggestions, performed, and written up by the student. Five hours, second term.

8. SEEDS. Judging of wheat, oats, barley, corn, potatoes, etc.; a study of market grades. The quality and preservation of seeds, shrinkage, vitality, germination, methods and depth of seeding, weeds and weed seeds, their identification and methods of eradication; smuts of oats and wheat, blight, scab, and rot of potatoes: the cause and prevention. Class room, laboratory, and field work. Elective. Three hours, one term.

#### ANIMAL HUSBANDRY.

1. MARKET TYPES. The judging of market types of horses, beef cattle, sheep and swine. Some score card practice will be given, but most of the work will be comparative judging of groups of animals. Four hours, one term.

2. BREED TYPES. This course covers the origin, history, and characteristics of the different breeds of horses, cattle, sheep and swine, special stress being laid upon their adaptability to western conditions. In addition instruction is given in the judging of representatives of different breeds, according to their official standard. Three hours, second term.

3. ANIMAL NUTRITION. A brief study of the anatomy and physiology of the digestive system, and the purpose of nutrition. The theory and practice of feeding, with special reference to Utah's conditions as to feed, climate, etc., are taken up. Five hours, first term.

4. PRINCIPLES OF BREEDING. A study of the laws of heredity, correlation, revision, variation, and fecundity, and of the methods of breeding, cross-breeding, in-and-in breeding, and selection. In addition, special study will be given to the methods of celebrated breeders. Three hours, first term.

5. LIVESTOCK MANAGEMENT AND HERD BOOK STUDY. The

housing, care and management of the different classes of livestock, followed by a study of the various herd books and pedigrees of noted individuals of the important breeds. Elective. Three hours, second term.

6. ADVANCED STOCK JUDGING. A course in the judging of groups of animals of all classes. It takes up the work done at fairs, and prepares students for real judging in the ring. Elective. Prerequisites, Animal Husbandry 1 and 2. Two hours, first term.

7. PRACTICAL FEEDING. This course is a combination of many of the principles of courses in feeding and management, and will be wholly practical. Some time will be given to the laws of nutrition, the balancing of rations, and the care and management of all classes of livestock. Three hours, first term.

#### DAIRYING.

1. ELEMENTS OF DAIRYING. The secretion and composition of milk; testing for fat, acid and adulterants; dairy sanitation; pasteurization; separation; manufacture of butter and cheese on the farm. Two lectures and one laboratory period, first term. Three credits.

2. INSPECTING AND TESTING DAIRY PRODUCTS. A study of the Babcock test; acid tests; methods of detecting preservatives and adulterations in milk and its products. Prerequisites, Dairying 1 and one term's work in Chemistry. Two laboratory periods. Two credits.

3. FARM MANAGEMENT. Selecting cows by appearance and by test; herd management, care, feeding, breeding; arrangement and construction of dairy farm buildings; dairy farming as related to other branches of agriculture. Each student will be required to submit an original plan of a complete dairy farm with figures showing its estimated cost, the expense of operating, and the profits to be derived from the business. Two hours, first term.

4. **BUTTERMAKING.** A course designed to meet the needs of creamery men. Receiving, sampling and separation of milk; pasteurization; preparation and use of starters; ripening of cream; principles of churning, salting working and packing butter; creamery accounting, construction of creameries. Prerequisite, Dairying 1. One lecture and two laboratory periods. Three credits.

5. **CHEESEMAKING.** A course for cheese factory operators; a study of the manufacture of the different kinds of cheese; the principles involved in the setting, cutting, heating milling, salting, pressing, and curing of cheese; cheese factory construction. Prerequisite, Dairying 1. One lecture and one laboratory period of six hours. Three credits.

6. **DAIRY BACTERIOLOGY.** A study of the kinds and number of bacteria in milk, cream, butter, and cheese, and of their effect upon the quality of the various dairy products. Prerequisites, Dairying 1 and Chemistry. One lecture and one laboratory period. Two credits.

7. **RESEARCH WORK.** A study of various important dairy subjects; a digest of recent dairy work of the Experiment Stations. Only advanced students will be allowed to take this course. One credit.

#### POULTRY.

1. **POULTRY HUSBANDRY.** This course consists of lectures assigned readings and recitations on the history and classification of the breeds of domestic poultry; judging, breeding, feeding, housing and general management; natural and artificial incubation and brooding, and marketing. Two hours, one term.

2. **INCUBATOR PRACTICE.** Operating incubators and brooders. A complete record covering all the important phases of the work will be required. Daily, morning, noon, and afternoon, for five weeks. One credit. Given each term. Must follow or accompany course one. Credit according to amount of work done.

3. SPECIAL POULTRY PRACTICE. This course consists of practical work in feeding for egg production and for meat, killing and marketing fowls and general management. Must follow or accompany course one. Credit according to amount of work done. Second term.

#### ECONOMIC ENTOMOLOGY.

1. ECONOMIC ENTOMOLOGY. A series of lectures on the principal injurious and beneficial insects of the intermountain region. Life-histories of these insects are discussed and remedial measures studied. The student will become familiar with the use of spraying apparatus and the preparation of spraying mixtures and other insecticides, and with general remedial and cultural methods. Three recitations, one term. Three credits.

2. GENERAL ENTOMOLOGY. A general knowledge of structure, habits, and classification of insects with methods of preparation for study, will be given in this course. A properly mounted, labeled and classified collection will be required of each student. Two recitations and one laboratory period throughout the year. Three credits.

3. ADVANCED ENTOMOLOGY. Lectures relating to classification and distribution of insects with special attention to the local fauna and their relations as beneficial and injurious species. Prerequisite, course 1 or 2. Elective. Three or five credits.

4. ENTOMOLOGICAL LITERATURE. Designed for students taking advanced work in Entomology. Bulletins and reports dealing with the subject are examined; the history of economic problems receive attention. Prerequisite, course 1 or 2. Elective. Three or five credits.

#### HORTICULTURE.

ELEMENTARY HORTICULTURE. This course is given to high school students as an introduction to the fundamental principles of

plant culture. It is intended to give a general synopsis of various horticultural methods which aid in securing better orchard and garden crops. Two credits. Given each term.

1. **POMOLOGY.** This course deals with the theory and practice of fruit growing. Such practical questions as the following are carefully considered; selection of site for an orchard, with reference to the soil, exposure, markets and general climatic conditions; planting and laying out an orchard; profitable varieties; the general care and management, including such subjects as cultivation, irrigation, pruning and spraying. The systematic aspects of the subject receive careful attention. The description and identification of all species and varieties obtainable constitute part of the work. The origin and classification of cultivated fruits are thoroughly reviewed. Bulletins from various Experiment Station, and pomological records are studied. Reference works: Thomas, *American Fruit Culturist*; Bailey, *Principles of Fruit Growing*; Card, *Bush Fruits*; Budd and Hansen, *Systematic Pomology*. Three hours, first term.

2. **GARDENING.** The course treats the subject from the standpoints of vegetable and landscape gardening. Four hours, second term.

(a). **Olericulture (Vegetable Gardening.)** The origin, history and botanical relationships of garden vegetables; soil, fertilizers and general cultivation; planting, transplanting, rotating, harvesting, storing, and marketing crops. Bailey, *Principles of Vegetable Gardening*.

(b) **Landscape Gardening.** A study of the principles governing the laying out of walks and drives, making of lawns, planting of shrubbery, designing of beds and borders,—in short, everything relating to the ornamentation of the home grounds. The college campus and greenhouses give students ample opportunity to become familiar with ornamental plants. Excellent reference works are in the library.

3. **PLANT BREEDING.** This course gives a more thorough knowledge of the principles underlying the improvement of plants.



The opinions of the leading scientists in relation to variation, heredity, hybridization, etc., are studied. Four hours, first term.

4. EVOLUTION OF PLANTS. Following Plant Breeding as a sequel, is given this course, dealing with the evolution of plants. Particular attention is given to the origin and domestication of those commonly cultivated. Four hours, second term.

5. INVESTIGATION. Seniors in Horticulture and Entomology are allowed to carry on investigations in the subjects in which they have special interest. Two laboratory periods a week, one credit. Elective throughout the year to advanced students in Horticulture.

6. LANDSCAPE DESIGNING. A study of ornamental plants and methods of grouping the same in laying out public grounds, parks, etc. Students are required to submit plans showing the application of principles studied in certain problems. Elective, second term. Three credits.

7. HORTICULTURAL LITERATURE. A critical study and examination of books, bulletins, reports, etc., dealing with horticultural subjects. Elective. Time and credit to be arranged with the instructor.

8. ADVANCED POMOLOGY. To students who desire to elect advanced work in Pomology, certain problems dealing strictly with the raising and handling of fruits will be assigned for careful study. Time and credit to be arranged with the instructor.

#### IRRIGATION AND DRAINAGE.

The law which prohibits the College from giving degrees in engineering, also prohibits the University of Utah from giving instruction in irrigation. This eliminates from both schools the possibility of training young men for irrigation engineering—one of the most vital branches of engineering in the West. To meet this unfortunate condition the State School of Mines and the Agricultural College offer, jointly, a course leading to the degree of Bachelor of Science in Irrigation Engineering. The first years

of this course are given by the Agricultural College, and are identical with the college course in Irrigation and Drainage. The last two years, which deal almost wholly with the technical work in engineering, are given by the School of Mines at Salt Lake City.

1. FARM IRRIGATION AND DRAINAGE. This course is designed especially to meet the requirements of the student who can spend but a limited time in this subject. Lectures are given on field irrigation and methods of farm drainage. Field excursions are made to farms which are being drained and the practical side of the work is emphasized. Three hours, one term.

2. SOILS AND WATER. The effect of the soil and moisture environment upon plant production and the economic use of irrigation water. Three hours throughout the year.

3. FARM DRAINAGE. A general treatment of the subject of drainage of lands in the arid section with special reference to laying out and constructing various kinds of under drains. Three hours, second term.

4. IRRIGATION. This course is designed to meet the practical problems encountered in the operation of canal systems, including sources of supply and methods of securing and improving such supplies. Particular reference is made to canal management, methods of measuring and dividing water and preventing seepage losses.

5. IRRIGATION. This course includes surveys for farm and district drainage systems, with estimates of cost, a study of the best system of operation to meet various conditions. State and Federal laws relating to irrigation and drainage, including methods of appropriating water and forming irrigation and drainage districts, are studied. Three hours throughout the year.

7. IRRIGATION. This course includes special investigations in connection with the Experiment Station work in irrigation or drainage.

## VETERINARY SCIENCE.

1. GENERAL COURSE IN VETERINARY ELEMENTS. This course considers briefly elementary anatomy and physiology and the common ailments of domestic animals; the most prevalent contagious diseases, their causes, symptoms, course, diagnosis and treatment; measures for their prevention and cure. The course is taught by lectures and text books, and illustrated by observation and practice in the free clinics held each week. The aim is to teach the student how to care for and treat the animals on the farm. Three hours, one term.

2 and 3. COMPARATIVE ANATOMY OF THE DOMESTIC ANIMALS. This subject is studied throughout the entire year, and embraces descriptive and practical anatomy. A series of lectures, including the study of the bones, articulations, muscles, circulatory apparatus, the nervous system, the respiratory system, and the organs of digestion, the urino-genital apparatus, and the organs of special sense covers the subject of descriptive anatomy. The lectures will be supplemented by demonstrations from mounted skeletons, prepared specimens and charts. Practical anatomy comprises a comprehensive and thorough course in dissection. The student is required to make two complete dissections of the horse and such parts of other animals as may be deemed necessary. Each student is required to dissect, and pass an examination on the part assigned before passing to the dissection of another part. Elective. Three hours throughout the year.

4. PHYSIOLOGY. The course in Physiology consists of lectures, and demonstrations studied by the comparative method, the vital functions of the different species of the domestic animals and those of the human body being compared. A study of the physical and chemical laws as they are related to physiology, and the general properties of animal cells, their origin, development and growth, occupies the first term, and the special physiology of the various organs and tissues of the animal body is studied during the second term. Elective. Three hours throughout the year.

5. **SANITARY SCIENCE.** This course consists of a discussion of the following topics: The great plagues of history; the various causes of disease; the manner in which disease is propagated and spread, including the part played by meat and milk; the influence of soil configuration and climatic conditions; and the effect of environment, including ventilation, lighting, and draining of stables. Preventive measures, including disinfection, vaccination, and quarantine, and the methods of preventing the introduction and suppression of outbreaks of contagious diseases are discussed. Elective. Three hours throughout the year.

6. **EXAMINATION FOR SOUNDNESS.** This work includes lectures and practical examinations. The student is made familiar with the method of examination, what to consider as unsoundness, etc. A systematic search for disease, the various conditions likely to be found in each part and the effect they may have on the use of the animal. Elective. Three hours throughout the year.

7. **OBSTETRICS.** This course includes a review of obstetrical anatomy, reproduction, hygiene of pregnant animals, pathology of gestation, normal parturition, dystocia, obstetric operations, accidents of parturition, and diseases of the young animals. The college herd and the surrounding stock breeding community give opportunity for practical work. Elective. Three hours, second term.

8. **CLINICS.** Free clinics will be held at the hospital, and all students taking any of the courses in Veterinary Science are required to attend and assist in the work. It consists of free examination and treatment of the numerous cases brought in, representing all diseases common to this section of country and furnishing the clinic with abundant material for observation and actual application of the work of the class room.

#### AGRICULTURAL TECHNOLOGY.

1. **MECHANICAL DRAWING.** The course includes instruction in the elementary principles of mechanical and freehand

drawing, with practice in the use and care of drawing instruments. Six hours, first term. Two credits.

2. PLANE SURVEYING. The general methods of plane and topographic surveying and the use, care and adjustment of instruments. The field work is adapted to the requirements of the agriculturists in irrigation, drainage and land surveying. Two hours, second term.

3. FARM MECHANICS. This course deals with the tools and machinery of the farm, their development, design, construction, operation, draft, durability and care. A study of steam and gasoline engines is included. Three hours, second term.

4. RURAL ENGINEERING. The principles of rural road construction; arrangement, cost and design of farm buildings; fences, gates and material for their construction; the laying out of the farm and related problems. Three hours, first term.

5. HYDRAULICS. This course will meet the wants of the agriculturist rather than the requirements of the engineer. The flow of water in natural and artificial open channels, in pipes and flumes; the elementary laws of liquids in motion and at rest, and the elementary principles of water power development. Five hours throughout the year.

6. ROAD CONSTRUCTION. Such questions as establishing the grade, drainage, and roadbed; road materials, including different kinds of earth, gravel and stones; the slope of the road surface; rock crushing, rolling, etc. The cost of building different kinds of roads and the proper manner of doing the various operations economically, will be fully discussed. Elective. Prerequisites, surveying and mechanical drawing. Five hours, first term.

7. ROAD MAINTENANCE. The effect of the width of tires upon the road, keeping the road in proper form, adding materials to worn surfaces, keeping the drainage channels clean, employment of labor on the roads, cost of maintenance, etc. Elective. Prerequisites, surveying and mechanical drawing. Five hours, second term.



## DOMESTIC SCIENCE AND ARTS.

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PROFESSOR HUNTINGTON.

ASSOCIATE PROFESSOR COOPER.

ASSISTANT PROFESSOR COOK.

MISS VIBRANS.

MISS LOVE.

MISS CROOKSTON.

MISS MCKAY.

1. **FOODS.** A study of the following subjects: The processes of cooking as applied to meats, vegetables, and fruits; combinations of food for the meal; rules for the waitress; cleanliness in its relation to the preservation and storing of foods; care of kitchen and kitchen utensils; care of dining room, china, glass, silver and linen. Two laboratory periods.

2. **HOME SANITATION.** A study of air, sunshine, water and waste disposal in relation to a healthy environment; application of sanitary principles to the selection and construction of a home and the prevention of diseases. Three hours, first term.

3. **HOME CONSTRUCTION, DECORATION AND MANAGEMENT.** A study of house plans and decoration; the arrangement of household affairs to economize money, time, and strength. Three hours, second term.

4. **FOODS.** A study of fruits and vegetables and meats, their food value and cost; preparing and serving meals with a given sum of money. Students plan the menu, do the marketing prepare and serve a dinner. Three lectures and two laboratory periods, first third of year.

5. **HOME CARE OF THE SICK, AND PERSONAL HYGIENE.** The aim of this course is to teach the student how to promote and maintain health, how to meet the emergency, and prevent the spread of contagious diseases. Practical work is given in invalid cooking, bandaging, bed-making. Two laboratory periods, second third of year.

6. LAUNDERING. A study of washing materials and their effect on various fabrics; the hygienic and athletic value of clean, well-ironed clothing. Three hours, last third of year.

7. HOME SANITATION. A study of sanitary principles as applied to the home and the community. Control of house bugs, disposal of waste, use of antiseptics for cleaning purposes. Three hours, first term.

8. HOME CONSTRUCTION AND DECORATION. A study of house plans, furnishings with estimate of cost, systems of heating, lighting and ventilating. Three hours, second term.

9. HOME ECONOMICS. Study of the home organization, methods of housekeeping, household accounts, work and domestic service. Three hours, second term.

10. FOODS. Experimental cooking. Designed to meet the needs of the teacher and to lay the foundation for all cooking. The aim of the work is to lead the student to see what cooking processes give best results in retaining nutritive principles in the most digestible form. One lecture and two laboratory periods.

11. FOODS, HUMAN NUTRITION. A study of the physiology of alimentation; the mechanical, chemical, and psycho-chemical process of digestion; foods as related to the body. Three hours, first term.

12. FOODS, ADVANCED COOKING AND DIETETICS. A study of the preparation and combination of foods for infants, children, adults, and the aged. Particular attention will be given to good balance and pleasing combinations of flavors. The practical work will consist of marketing, preparing, and serving meals. A series of chafing dish lunches will be given. One lecture and two laboratory periods.

13. THEORY AND PRACTICE OF TEACHING DOMESTIC SCIENCE. Study of Domestic Science from the educational standpoint. Students plan courses and equipment, estimate cost, and have experience in practical teaching. Three hours a week throughout the year.

14. FOODS. DEMONSTRATION. Training in giving demon-

stration lectures for students who wish to prepare for Farmers' Institute work, etc. Elective.

15. **CAMP COOKERY.** The aim of the course is to give a general knowledge of the underlying principles of cooking and their application to foods that are used in camp life; the study of cooking processes best adapted to camp conveniences; the planning of outfits for camp comfort. Elective..

### SEWING.

1. **HAND AND MACHINE MODELS.** This course aims to give the necessary stitches used in hand and machine sewing; care of machine and practice in use of attachments; a study of simple embroidery work as applied to the decoration of undergarments and white goods. Talks are given on the application of these principles to the completed garment. Eight hours, first term. Three credits.

2. **PLAIN SEWING.** Study of materials suitable for underwear; embroideries, laces and other trimmings; comparative values of materials; instruction in the use of patterns; drafting and making of three pieces of underwear from measurements; cutting, fitting and making of shirtwaist and a dress of washable material, from patterns drafted for the student; lectures, discussions and prescribed reading on textiles. A study is made of fabrics, their beginnings in the arts and industries of primitive life, the development of spinning and weaving, modern processes of manufacture, economic values, and the effect on social conditions. Each student weaves one small mat. Eight hours, second term. Three credits.

3. **DRAFTING AND DRESSMAKING.** Includes drafting from measurements patterns for waists, skirts, sleeves, collars, etc.; the use of ready-made patterns; drafting, cutting, fitting and draping, using as material paper and crinoline. The designs are made before the garment is begun, that each may have a definite idea to carry out. Eight hours, first term. Three credits.

4. **FRENCH MODELING, CUTTING AND FITTING.** Modeling in paper and crinoline from copies and original designs; further

practice in pattern making; fitting student friends under supervision of teacher; cutting, fitting and finishing a worsted dress and fancy waist. Economy of expenditure in time and material is considered. Eight hours, second term. Three credits.

5. **ADVANCED DRESSMAKING, HISTORY OF COSTUME.** This course offers instruction and training in the principles of garment making, cutting, basting, fitting, pressing, trimming and finishing. Drafting from measurements patterns of childrens' clothing, princess gowns, jackets, coats, etc.; modeling in paper and crinoline; supplemented by a study of historic costume. Eight hours, first term. Three credits.

6. **ART NEEDLE WORK.** This consists of drawn work, Spanish laid work, initials and monograms, Kensington work, Mount Mellick embroidery, and Roman cut work. Study of drawing design and color in connection with this work is taken in the Art Department. Each student spends the latter part of this term in making her graduating dress. Eight hours, second term. Three credits.

7. **HAND STITCHES.** The student makes a set of models covering the course in hand sewing; bands, folds, placket facings, bias facings, etc., are cut and made in paper; a study of simple embroidery stitches as applied to white goods, initials and monograms. Talks are given on the application of these principles to the completed garment. Five hours, first term. Two credits.

8. **MACHINE WORK.** Care of sewing machine, practice in use of attachments; study of materials suitable for underwear, embroidery, laces, and other trimmings; comparative values of materials; drafting and making of three pieces of underwear from measurements. Study of textiles as given in course two. Five hours, second term. Two credits.

9. **DRESSMAKING.** Includes cutting, fitting and making unlined skirts and waists from patterns drafted for student; use of ready made patterns; crinoline modeling and draping according to prevailing styles; cutting, fitting and making one dress of worsted material. Five hours, first term. Two credits.

10. DRAFTING AND MODELING. The following topics are considered: The principles of dress making; the taking of accurate measurements; the drafting of patterns for all ordinary garments; practice in fitting waists and hanging skirts under supervision of teacher; cutting, basting, fitting and finishing one dress. Five hours, second term. Two credits.

11. DRAFTING AND DRAPING. This course consists of drafting patterns; perfecting of detail in drafting, fitting, draping and finishing. The artistic side of construction and decoration is emphasized. Five hours, first term. Two credits.

12. THEORY AND PRACTICE OF TEACHING DOMESTIC ART. Courses of study in Domestic Art are formulated and equipments planned with estimates of cost. The collection and use of illustrative material will be discussed. Five hours, second term. Two credits.

13. MILLINERY. The aim of this course is to prepare women to make their own hats with the minimum expenditure of time and money, and to select suitable and pleasing designs and materials for the occasion and the individual. The work embraces the adjusting and altering of wire frames; the designing, drafting and making of buckram and wire frames; making plain covered hats with different finishings for brims; covering wire frame with straw; trimming of all styles of hats, according to the season; bows, flowers, feathers; study of form, line, color and texture. Two hours throughout second year. One credit.



## COMMERCE.

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PROFESSOR THOMAS.

ASSISTANT PROFESSOR GODDARD.

ASSISTANT PROFESSOR HENDRICKS.

MR. DAVIS.

## ECONOMICS.

1. ELEMENTS OF ECONOMICS. This course endeavors to explain the laws of man's economic activity. It is, therefore, the basis for a scientific understanding of industrial conditions. Some of the topics studied are: economic wants, value, rent, wages, profits, interest, etc. Three hours throughout the year.

2. AGRICULTURAL ECONOMICS. The first part of this course will be similar to Economics 1, but the second term will be devoted chiefly to a study of the agricultural conditions of the United States and particularly the Rocky Mountain Region. Three hours throughout the year.

3. HISTORY OF COMMERCE. Its development in Egypt, Greece, Rome, Florence, Medieval Europe, etc., down to and including the commercial nations of modern times. Special attention is given to materials and machinery of commerce, to trade routes, and to the relations between commercial development and other branches of the history of civilization. Three hours throughout the year.

4. ELEMENTS OF SOCIOLOGY. A general course in the foundations and principles of sociology. It includes a careful study of the social organs, social structure, and social activities. Three hours throughout the year.

5. MONEY AND BANKING. Forms and laws of money; the money question; credit and banking; the money market and foreign exchanges. Three hours throughout the year.

6. PUBLIC AND CORPORATION FINANCE. A course deal-

ing chiefly with the principles underlying public and corporative expenditures, incomes, debts, and administration. Three hours throughout the year.

7. TAXATION. A study of the methods of federal and state taxation, including the customs and internal revenue duties, direct income, business and inheritance taxes, and general property and corporation taxes. Three hours, second term.

8. ECONOMIC AND COMMERCIAL GEOGRAPHY. Economic and commercial geography of the United States; resources and leading industries of the different sections of the country with special reference to the Rocky Mountain States; basis of our foreign trade shown by the resources of different nations. Three hours throughout the year.

9. MARKETING OF PRODUCTS. The methods now practiced in the organization of the selling branch of industrial and merchandising business. The principal subjects in this field are: publicity agency, advertising, forms and correspondence, credits and discounts. Two hours throughout the year.

10. RAILWAY TRANSPORTATION AND PRACTICE. The development of the railway system, railway finance, railway statistics; the theory of rates, methods of public control in Europe, Australia, and America. Three hours, first term.

11. INDUSTRIAL AND COMMERCIAL LAW. A study of the elementary principles of law relating to common business transactions, including contracts, sales, promissory notes and bills of exchange, contracts of common carriers, agency, partnership and corporations. Three hours throughout the year.

15. A research course in Economics.

#### POLITICAL SCIENCE.

1. GOVERNMENT. Our European ancestors, origin of states and state institutions, English and American governments compared, state and foreign service, the treasury, money and coinage, banks, the post office, the executive departments, legislation, the

constitution, federal and state powers, political parties, party issues, etc. Three hours throughout the year.

2. (a) CONSTITUTIONAL LAW. The Constitution; the rise of the American Union; distribution and powers of the government; powers of Congress; powers of the Executive; the judicial departments; checks and balances of governments; government of the territory; the admission of new states; amendments to the constitution; civil rights and their guarantees; protection of persons accused of crime; protection of contracts and property, etc.

(b) INTERNATIONAL LAW. Persons concerned, rights and duties of state, territorial jurisdiction, jurisdiction on high seas, agents of the state nationality, treaties, settlement of disputes, war and its effects, military occupation, hostilities, neutrality, contraband, blockade, etc.

Elective. Three hours throughout the year.

3. COMPARATIVE STUDY OF GOVERNMENTS. A comparative study of the various systems of government,—Greece, Rome, Great Britain, Germany, France, Switzerland, United States, etc. Three hours, second term.

4. CONTRACTS. Assent and the necessity of its communication; offers and their expiration or revocation; consideration; contracts under seal; joint and several contracts; conditional contracts; duress; discharge of contracts by rescission; novation, accord and satisfaction; release of other means. Three hours throughout the year.

#### ACCOUNTING.

1. THEORY OF ACCOUNTS. The student is thoroughly drilled in the principles of debit and credit, in balancing and closing accounts, and in the making of trial balances, statements, and balance sheets. The journal, cash book, sales book, and ledger are used. Two hours daily, one term.

2. BUSINESS PRACTICE. The student employs the principles learned in course one in a manner approaching as nearly as pos-

sible to actual business. He performs complete transactions with the firms represented in the office practice department. Much of the work being done by correspondence, **special emphasis** is given to letter writing, and the student becomes familiar with all the commercial and legal forms in general use in the business world. He also learns the value of special column books adapted to use in mercantile business. A daily rapid calculation drill is given. Two hours daily, one term.

3. **OFFICE PRACTICE AND BANKING.** In this course the student is employed successively in offices representing various lines of business, as wholesale and retail merchandising, real estate and insurance, commission, railway station work, and banking. The most advanced accounting methods adapted to these various lines of business are illustrated, including card, loose leaf, and voucher systems. Corporation organization and accounting are emphasized. In this work the student is thoroughly drilled in adapting his theoretical principles to varied conditions and methods. Two hours daily throughout the year.

4. **EXPERT ACCOUNTING AND AUDITING.** This course is specially intended to prepare men for work as public accountants. It gives special attention to the following subjects: analysis of profit and loss accounts, distribution of corporation and partnership profits, methods employed in the verification of statements and accounts and in the detection of errors, estate accounting, and a comparative study of the various systems employed in different lines of business. Daily throughout the year.

#### COMMERCIAL ARITHMETIC.

This is a complete course in commercial mathematics. Particular attention is given to business measurements, and to percentage and interest as applied to profit and loss, commission, stocks and bonds, insurance, bank discount, averaging accounts, and partnership adjustments. Short methods are emphasized. Daily throughout the year.

## STENOGRAPHY.

1. STENOGRAPHY I. This is a thorough, practical course, designed for the two-fold purpose of preparing the student for amanuensis work and laying a foundation for the more advanced work of rapid reporting. After the principles of the text are mastered, the dictation of various forms of commercial correspondence is taken up. Graham's Phonography, one of the most successful of the many excellent Pitmanic systems, is taught. Five hours throughout the year. Four credits.

2. STENOGRAPHY II. After a thorough review of the text books, advanced correspondence work, legal documents, speeches, specifications, editorial matter, court testimony, etc., are taken up. This course is designed especially for students who desire to qualify for the United States Civil Service, or for reporting work. A study of public meetings, court procedure, and reporting of public meetings, and trials in Logan vicinity. Much transcribing on the typewriter is required. Five hours throughout the year. Three credits.

## TYPEWRITING.

1. TYPEWRITING I. Beginning with simple exercises, the student learns correct fingering and the proper manipulation of the typewriter. Special attention is given to the care and mechanism of the machine. Five hours a week throughout the year. One credit.

2. TYPEWRITING II. A special course for those taking Stenography. In addition to the elementary principles given in Typewriting I, students make copies of correctly written correspondence, legal forms, etc.; also personal composition and dictation. As soon as moderate speed is attained, the work includes transcription of shorthand notes. One hour daily throughout the year. Two credits.



**PENMANSHIP.**

1. This course aims to develop a practical handwriting. Much stress is laid on movement, position of hand and body, etc. Beginning with easy movement drills, the student is led into more difficult exercises, completing with words and short sentences. Designed for first year students and for Winter Course students. Five hours a week throughout the year. Two credits.

**SPECIAL LECTURES.**

A series of about ten lectures on practical business subjects will be given during the year by prominent business men throughout the state. All Commercial students are expected to attend these lectures.

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**MECHANIC ARTS.**

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PROFESSOR JENSEN,  
MR. HANSEN,  
MR. PULLEY,  
MR. NEWHEY,  
MR. FREW,  
MR. MADSEN.  
MR. ALDER.

**TECHNOLOGY.**

1. The properties and characteristics of the materials used in construction; its preparation for use; tests of the strength and quality of materials; their preservation, etc. In addition to the usual tests of materials, tests are made of chains and welded bars of iron, of the force required to drive various kinds of nails, of

the holding power of nails and screws, etc. Two hours throughout the year.

#### MECHANICAL DRAWING.

1. (a) MECHANICAL DRAWING. This course consists of a thorough drill in the elementary principles of projection, including linear perspective and the more common conventions of mechanical drawing. Prerequisite, Art 1, 2 or 3. Nine hours throughout the Year. Three credits.

(b) DRAWING AND DESIGN. The work is adapted to the line of shop work which the student is pursuing. It is intended to give practice in design with consideration of proper proportion for strength as well as for aesthetic qualities. The student is expected to make his own designs for his work in the shops. Prerequisite, Art 2 and Mechanical Drawing 1 (a). Nine hours throughout the year. Three credits.

#### CARPENTRY.

1. (a) Rudimentary exercises in sawing, ripping, planing, mortising, dovetailing, and general joinery, and the application of these to simple articles of furniture. Correct methods of using and handling tools are emphasized. Fifteen hours, first term. Five credits.

(b) Sharpening and adjusting of carpenter's tools, and saw filing, followed by practice in making panels, doors, and sashes, and in simple cabinet work. Fifteen hours, second term. Five credits.

2. (a) Plain cabinet making, concluding with the construction of a model carpenter's work bench. First term.

(b) Wood turning and other machine work in wood and the construction of a standard carpenter's tool chest. Second term. Prerequisite, course 1 (b).

Fifteen hours throughout the year. Five credits.

3. The principles and practice gained in the foregoing courses are applied to frame house building. If possible, practice in building a regular house is given, but when such opportunity cannot be had, special parts, such as a section of wall, including doors and windows, hips, and valleys in roofs, etc., are built in the shops. Prerequisite, course 2, but students desiring to specialize in house-building may be permitted to take this course at an earlier date. Fifteen hours throughout the year. Five credits.

4. The students in this course are allowed to specialize either in cabinet making, including carving and finishing, or in the inside finishing of houses, including work in stair-building. The selection and design of the work is left largely to the student, subject to the approval of the instructor. Each design must be complete in itself, and must be finished during the year. Fifteen hours throughout the year. Five credits.

5. A series of selected exercises from courses 1 (a) and 2 (b). Six hours, first term. Two credits.

#### FORGING AND CARRIAGE BUILDING.

1. (a) Preliminary exercises, such as drawing, bending, twisting, and shaping, followed by exercises in iron welding, making tongs, and other forge tools. Accuracy in methods and results is insisted upon. First term.

(b). Practice in steel and iron welds, and general work in steel forging and dressing. Chisels, punches, reamers, hammers, wrenches, andirons, and ornamental gates, etc., are sample exercises. Second term. Prerequisite, course 1 (a).

Fifteen hours throughout the year. Five credits.

2. (a). Advanced exercises in iron and steel; axle and tire setting, resetting and tempering springs, and horse-shoeing. First term.

(b). A continuation of horse-shoeing; elementary carriage woodwork, including sawing, planing, mortising, the use of the

draw-knife, and spoke shaves, making the woodwork of selected vehicles from shop drawings. Second term.

Prerequisite, course 1. Fifteen hours throughout the year. Five credits.

3. Advanced horse-shoeing, wheelwrighting, and elementary carriage building, concluding with the construction of an approved vehicle, is the work of the third year. Prerequisite, course 2. Fifteen hours throughout the year.

4. A series of selected exercises from course 1 (a), followed by work in horse-shoeing and in repairing agricultural implements. Six hours, second term. Two credits.

#### MACHINE WORK.

1. (a) Elementary forging, concluding with the making, dressing and tempering of lathe and planer tools; special work in chipping, filing, hand polishing and scraping. First term.

(b). Preliminary exercises in drilling, planing, straight and taper turning, accompanied by instruction in the care and use of machinery. Second term.

Fifteen hours, throughout the year. Five credits.

2. (a). Exercises in boring and chucking in the lathe, thread cutting, polishing and milling. Cone pulleys, bearings, stuffing-box-glands, grind-stone shaft, are sample exercises. First term.

(b). The manufacture of gear wheels, shaft-couplings, jack-screws, tap wrenches, eccentrics, and cranks for steam engines, constitute the work of the second term.

Prerequisite, course 1. Fifteen hours throughout the year. Five credits.

3. (a). The work of this course is principally making engine connecting rods, mandrels, taps, spiral drills, counter-bores, etc., giving practice on the grinding machine. First term.

(b). Practice in making fluted reamers, grinding and mak-

ing milling cutters, special attention being paid to the forms of the cutting edges. Second term.

Prerequisite, course 2. Time and credit same as course 1.

4. Actual machine construction, factory methods being emphasized. Speed lathes, sensitive drills and power hack-saws may be taken as sample exercises. Prerequisite, course 3. Time and credit same as for course 1.

#### FOUNDRY WORK.

1. Thorough practice in moulding and general foundry work, including iron and brass casting. The patterns chosen illustrate a wide range of work, the course being intended to give a general knowledge of foundry practice. Elective. Six hours, first term. Two credits.

2. Special moulding, emphasizing such work as will be required in connection with the work of machine design. Elective. Six hours, second term. Two credits.

#### SLOYD.

Intended primarily for younger students who are not sufficiently developed physically to carry the heavier work of the regular Mechanic Arts course. It is also well adapted for teachers who desire to qualify themselves for teaching Sloyd in the district schools. The best Swedish and American methods are followed.

1. (a). Simple household and school-room articles, such as pointers, bread-boards, clothes-horses, foot-stools, scoops, etc., constitute the exercises of this course. Elective. Four hours, first term. Two credits.

(b) Elementary turning and scrolling, simple carving, and the completion of a small cabinet. Elective to students who have completed 1 (a). Four hours, second term. Two credits.



## ART.

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ASSISTANT PROFESSOR FLETCHER.

MR. POWELL.

1. NATURE DRAWING AND DESIGN. Drawing from plant, animal, and insect forms with a view to preparing students for their scientific work as well as developing their artistic sense. Part of the time will be devoted to the study of the principles of design and their application to the ordinary things of life. Five hours throughout the year. Two credits.

2. DESIGN. The work in this course aims to acquaint the student with the principles that underlie all art. The fundamental principles of order, as expressed by balance, rhythm, and harmony, are considered and problems of home life embodying these principles are worked out. It is preparatory to the Home Art course. Five hours throughout the year. Five credits.

3. FREEHAND DRAWING AND DESIGN. Perspective and sketching from objects and theory with careful attention to pencil rendering, emphasizing accuracy in the judgment of form. Ornamental drawing from casts and decorative details. Constructive design in furniture. This work is supplemented by lectures on the history of furniture and architecture. Nine hours throughout the year. Three credits.

4. HOME ART. Review of the principles of order and their application to the home. A study of what is most suitable in curtains, rugs, furniture, wall papers and hangings, wood finish, pictures, etc.; stenciling, drawing, weaving, and other forms of applied design are taught. Lectures are also given on the history of architecture, furniture, painting, and sculpture. Nine hours, first term. Three credits.

STUDIO WORK. Opportunity is given for special work in pure design, design in leather, textiles, basketry, carving, cast drawing, pose drawing, animal drawing, clay or wax modeling, lettering, illustrating, pencil and pen sketching, and painting in oil, water, or pastel. Elective. Hours to be arranged by the instructor.

## BACTERIOLOGY.

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PROFESSOR FREDERICK.

1. GENERAL BACTERIOLOGY. This course comprises a study of the history, morphology and classification of bacteria, especially of the common disease germs; methods of preparing culture media, obtaining pure cultures, sterilization, mounting, staining, and inoculation. Special attention is given to sanitation, and prevention of contagious diseases. Yeasts and moulds are studied, and air, water and soil examined. Nitrifying organisms and the relation of bacteria to soil fertility are discussed. One lecture and two laboratory periods, first term. Three credits.

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## BOTANY.

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ASSISTANT PROFESSOR SMITH.

2. SYSTEMATIC AND MORPHOLOGICAL BOTANY. The aim in this course is to make the students familiar with the higher plants and the terms used in their description and classification. Gray and Coulter, *Textbook of Western Botany*. Two recitations and one laboratory period, one term.

3. HISTOLOGY. A study of plant anatomy, protoplasm, the cell, and various tissues, Prerequisite, Course 2. One recitation and two laboratory periods, first term.

4. PLANT PHYSIOLOGY. The functions of growth, such as the absorption and use of food, movement of water in the plant, respiration, reproduction, changes of color; the effect of gases, changes of temperature, etc., on the life of plants. Prerequisites, Courses 2 and 3. One recitation and two laboratory periods, second term.

5. PLANT PATHOLOGY. A study of some of the forms of parasitic plants common to this western country. One lecture and two laboratory periods, second term.

*Advanced Elective Courses.*

Prerequisites, courses 2, 3 and 4. Time to be arranged with the instructor.

6. ECONOMIC BOTANY. A study of useful plants and plant products. This course is presented by lectures and assigned readings upon which reports are given. Two credits.

7. ECOLOGY. A study of plant relations and adaptation to particular environment. This course consists largely of field work. Reports of investigations are required. Two credits.

8. CYTOLOGY. A study of plant cells and their contents from the biological standpoint. Three credits.

Courses in Systematic Botany can be arranged as follows:

9. ALGAE AND FUNGI. One lecture and two to four laboratory periods per week. Credit according to work done.

10. MOSSES AND FERNS. (As in course 9.)

11. SEED PLANTS. Lectures and field work with herbarium, particular attention being given to one or all of the following groups: (a) Gymnosperms. (b) Exogens. (c) Endogens. Credit according to work done.

12. FOREST BOTANY. A study of systematic botany as related to forestry; forest plant ecology. Three hours, second term.

13. POISONOUS PLANTS. A course has been arranged to familiarize students of Veterinary Science with plants commonly supposed to be poisonous to animals. A herbarium of local species must be collected. Prerequisite, course 2. Three hours, second term.

## CHEMISTRY.

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PROFESSOR STEWART.

ASSISTANT PROFESSOR GREAVES.

ASSISTANT PROFESSOR PORTER.

MR. WALKER.

MR. WALTERS.

1. GENERAL ELEMENTARY CHEMISTRY. The important facts and fundamental theories of chemistry, and its application in the arts and manufactures. The laws of chemical combination, the writing of reactions, and solving of chemical problems are given careful consideration. Nine hours throughout the year. Five credits.

2. ORGANIC CHEMISTRY. This course embraces a brief survey of the more important reactions and compounds of the fatty and aromatic series of hydrocarbons and their derivatives, together with a full discussion of the nature and influence of molecular structure. Prerequisite, Chemistry 1. Four hours, first term.

3. AGRICULTURAL CHEMISTRY. Lectures and assigned readings on the chemical problems of agriculture. The aim is to make the student familiar with our present knowledge of the composition of plants; the essential composition of plant foods, the changes through which they pass and their role in plant economy; the composition of animals; the principles of animal nutrition and the chemical nature of waters, dairy products, etc. Prerequisite, Chemistry 1 and 2. Three hours throughout the year.

3a. ADVANCED AGRICULTURAL CHEMISTRY. This course is given to meet the needs of those students who require more work in this line of chemistry than can be given in the first course. Some of the subjects treated are: the carbohydrates, their metabolism in plants and animal organisms; the proteins, their value in the plant and animal economy; the relationship between the fats, carbohydrates and proteins; the importance of inorganic sub-

stances in the building of cells and tissue. Three hours, throughout the year.

4. **CHEMISTRY OF FOODS AND COOKERY.** Foods and methods of cooking are studied experimentally, with especial reference to human nutrition. The common foods, both animal and vegetable, are separated by physical and chemical means into their constituents, after which the effects of different methods of cooking are investigated. Prerequisites, Chemistry 1 and 2. Nine hours, second term.

5. **CHEMISTRY OF THE SOIL.** A study of the methods of analysis of soils and the interpretation of the results; physico-chemical investigations of soils in their relations to crop production; soils of the arid and humid regions; alkali soils, their nature and composition, utilization and reclamation; soil fertility and methods of maintenance; influence of irrigation upon the production of nitrates, fixation of potash and phosphoric acid. Considerable stress is laid upon the value, composition and preservation of barn-yard manure. Prerequisites, Chemistry 1, 2 and 3. Three hours, second term.

6. **ANALYSIS OF FOODS AND FEEDING STUFFS.** Various farm products used for food are analyzed to determine quantitatively the different constituents, as proteids, carbohydrates, fats, crude fibre, etc. Prerequisites, Chemistry 1 and 3. Three hours throughout the year.

7. **PHYSIOLOGICAL CHEMISTRY.** In this course the student considers the chemical changes going on in the living animal body; the essential composition of foods and the changes through which they pass in the animal economy; the chemistry of secretion and excretion; the chemistry of protoplasm and of the blood; etc. Prerequisites, Chemistry 1 and 2. Three hours throughout the year.

8. **ELEMENTARY PHYSICAL CHEMISTRY.** Lectures and recitations on some of the fundamental laws and theories of chemistry, including atomic theory, kinetic theory of gases, gaseous, liquid, and solid states, solution, vapor pressure, osmotic pres-



sure, thermo-chemical relations, electrolytic dissociation, chemical equilibrium, law of mass action, isomerism and isomorphism. Elective. Prerequisites, Chemistry 1 and Physics 1. Two hours throughout the year.

9. INDUSTRIAL CHEMISTRY. Lectures and assigned reading on special chemical industries, e. g., the manufacture of sulphuric acid and soda, commercial fertilizers, lime and cements, glass and porcelain, pigments, sugar, starch, alcohol, soap, explosives, etc. Elective.

10. QUANTITATIVE ANALYSIS. This is mainly a laboratory course, giving the student practice in the typical methods of proximate and ultimate quantitative chemical analysis. Elective.

11. ADVANCED QUALITATIVE ANALYSIS. This is purely a laboratory course, and is recommended to those General Science students who specialize in Chemistry. Elective. Prerequisite, Chemistry 1. Three hours, first or second term.

12. RESEARCH WORK. The laboratories of the College and the Experiment Station are open to students with the necessary preparation, who desire to pursue special independent studies in chemistry. The researches carried on by the chemical department of the Experiment Station are of great aid to students who are engaged in the solution of scientific problems. Elective. Prerequisites, courses 2 and 5.

## ENGLISH.

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PROFESSOR LARSEN.

ASSISTANT PROFESSOR PEDERSEN.

ASSISTANT PROFESSOR HOLMGREN.

MISS HUNTSMAN.

MISS KYLE.

MISS STEWART.

1. COMPOSITION, GRAMMAR AND CLASSICS. A course in elementary composition, with special emphasis on grammatical correctness. Three short themes or one longer composition required weekly. The study of grammar aims at displacing habitual errors of speech by the correct forms. Several elementary classics are read. The course is designed for all students not prepared to do first year high school work. Five hours throughout the year.

4. ELEMENTARY COMPOSITION AND CLASSICS. The student is required to write two short themes a week and a long theme once a month. The aim is to secure correctness combined with spontaneity. Throughout the course special drill is given on those grammatical principles most frequently violated. Spelling and the correct use of the dictionary also receive careful attention. A considerable amount of reading is assigned, both for careful study and for outside work, and pupils are required to commit and deliver passages from the texts studied in the class room. Five hours throughout the year.

4a. COLLEGE ENTRANCE REQUIREMENTS. A course in the careful study of classic masterpieces, especially such as are designated by the committee on College Requirements in English. A high school course; not given in 1909-10. Elective. Four hours throughout the year.

5. ENGLISH COMPOSITION. Class room discussions of the principles of composition; themes, assigned readings, and conferences. It is intended to make this an extremely practical course. To this end a large amount of oral and written composition is

required; during the entire year three one-page themes are prepared each week, and longer themes are written monthly. Each student has regular conference periods with his instructor. A certain number of classics are carefully studied in class, and others are assigned for outside reading. This prescribed reading supplies passages for memorizing and furnishes material for themes and class-room discussion. Five hours throughout the year.

5a. ELEMENTARY ARGUMENTATION AND DEBATING. A course designed primarily to give the high school student abundant practice in debating, extempore speaking and argument. Elective. Three hours throughout the year.

6. ENGLISH LITERATURE. History and development of English literature in outline, from the Anglo-Saxon period to the present day. This course is the only prescribed course in English Literature. It gives a general knowledge of the progress and growth of literature in England. All the important authors are studied, not only in relation to the great literary movements, but also in relation to the historical background. The work is carried on partly by lectures, partly by recitations. A great deal of prescribed reading furnishes material for class-room discussions and written reports, thus giving the students constant practice in composition. The student is also required to commit a number of poems or parts of poems to memory. Three hours throughout the year.

7. ADVANCED RHETORIC. Lectures, recitations, assigned readings, themes, and conferences. This is intended to be a comprehensive course in College Rhetoric, with special attention to the forms of prose discourse. The practical work consists of themes, oral discussions, and debates. A certain amount of outside reading is prescribed. Three hours throughout the year.

The following courses in English are all elective. Only three, or at the most four, full courses will be given in any one year, hence, before registering, students will please consult with the head of the department. Prerequisite, English 6 or its equivalent.

8. THE ELIZABETHAN DRAMA. The origin and development of the drama in England; its history to the closing of the theatres in 1642. Incidentally the technique and various types of drama receive attention. Lectures, readings and reports. Three hours throughout the year.

9. THE ROMANTIC MOVEMENT. The origin and growth of romanticism in English prose and poetry of the eighteenth and nineteenth centuries; foreign influences and parallels. Three hours throughout the year.

10. SHAKSPERE. A course in Elizabethan English based on the careful detailed study of six of Shakspeare's plays. Textual interpretation; some outside reading. Three hours throughout the year.

10a. SHAKSPERE. A comprehensive study of his development as a dramatist, including the reading of all his plays and sonnets. Lectures and reports; supplementary reading. Three hours throughout the year.

11. LITERARY TYPES. An investigation of the various types of prose and poetry, including a survey of English versification. Lectures, readings and reports. Three hours throughout the year.

12. AMERICAN LITERATURE from the Colonial times to the present, keeping in view contemporary development in England. Lectures, assigned readings, reports. Three hours throughout the year.

13a. THE ENGLISH NOVEL. Its origin, development and most important types. The short-story also receives attention. Lectures, class-room discussions, readings and reports. Three hours, first term.

13b. TYPES OF FICTION in the eighteenth and nineteenth centuries. Lectures, assigned readings and reports. Three hours, second term.

14. MILTON and his contemporaries. A careful study of the life, times and works of Milton, together with a survey of contemporary literature in England. Three hours, first term.

15. THE ENGLISH ESSAYISTS. Lectures and reports, oral and written, on the essayists from Bacon to Stevenson. Assigned readings and seminars. Three hours, second term.

16a. ROMANTIC POETS OF THE EARLY NINETEENTH CENTURY. A study of the poetry of Wordsworth, Coleridge, Scott, Byron, Shelley, and minor poets. Lectures, readings and reports. Three hours, first term.

16b. STUDIES IN THE VICTORIAN POETS: Tennyson, the Brownings, Matthew Arnold, the Pre-Raphaelites, minor poets. Lectures, readings and reports. A continuation of English 16a. Three hours, second term.

17. THE SEVENTEENTH CENTURY. A study of the most important works produced in England between 1600 and 1700, more emphasis being placed on the periods following the Elizabethan. Three hours throughout the year.

18. THE EIGHTEENTH CENTURY. A study of the main currents of English literature between 1700 and 1800, prefaced by a historical survey of the century. Chiefly a reading course, with due emphasis on the lives of the great writers. Lectures and reports. Three hours throughout the year.

19. THE NINETEENTH CENTURY. The culmination of romanticism, the rise of the novel, the Victorian poets and essayists. Lectures, readings and reports. Three hours throughout the year.

20. ARGUMENTATION AND DEBATING. A course for college students offering them a maximum of practice in debating, and argumentative writing and speaking. Three hours throughout the year.

21. THE BIBLE AS ENGLISH LITERATURE. Lectures, assigned readings, and reports. The entire Bible will be read and its history studied. Considerable attention is given to the historical setting of the various books. Three hours throughout the year.

22. ELOCUTION I. This course is designed for the development of the power of vocal expression and also as a general interpretative course in literature. A variety of the best literary selection are studied from the oral standpoint with the view of making



them more intelligible to the reader and listener in their content and purpose. Prerequisite, English 4. Three hours throughout the year.

23. ELOCUTION II. In this course the principles of literary expression are applied in the main, to the interpretative study of dramatic literature. Shakspeare and some of the modern dramatists are carefully studied interpretatively. Prerequisite, Elocution I. Three hours throughout the year.

24. PUBLIC SPEAKING. Practical training in the various forms of public speaking: the formal address, the debate, the eulogy, the oration, the short, impromptu speech, the toast. The aim of this course is to train the pupil to think on his feet, and to deliver himself intelligently, logically, effectively and with ease. Prerequisite, English 5. Three hours throughout the year.

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## GEOLOGY.

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ASSISTANT PROFESSOR PARKER.

1. PHYSIOGRAPHY. Intended to develop observation, and give an appreciative knowledge of nature's work in and about the earth. The subjects studied include: the earth in space, the structure of the earth, land forms, erosions, lakes and lake basins, glaciation, the sea and its work, the atmosphere and the effect of physiographic conditions on agricultural products. An effort will also be made to give each student some knowledge of the common rocks. Fairbanks, *Physical Geography*. Two hours throughout the year.

2. GENERAL GEOLOGY. Intended to familiarize the student with the physiographic changes now in progress and the agencies which produce them, with the origin and structure of the various materials composing the earth's crust, and with the chronological succession of the great formations. A careful study of the development of the North American continent from the ear-

liest time will comprise most of the second term's work. Enough field practice is given to introduce the methods by which the geological phenomena of a given area may be interpreted. Scott, *Introduction to Geology*. Three hours throughout the year.

3. ECONOMIC GEOLOGY. The object is to give the student some idea of the mineral resources of the United States. The work will include a careful study of the processes of preparation, and economic value of coal, petroleum, natural gas, asphaltum, building stones, cements, clays, mineral fertilizers, mineral water, fuller's earth, lithographic stone, precious stones, etc. Much of the information will be taken from the Reports of the United State Geological Survey. Elective. Prerequisites, Geology 2 and Chemistry 1. Two hours throughout the year.

4. MINERALOGY. A systematic study of the common minerals as outlined in Dana's Manual. The student is furnished with excellent specimens of all the minerals studied, for both tests and comparisons. The course is essentially individual laboratory work in blow pipe analysis and determinative mineralogy. Elective. Prerequisite, Chemistry 1. Two hours throughout the year.

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## HISTORY.

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ASSISTANT PROFESSOR EVANS.

1. GREEK AND ROMAN HISTORY. An elementary course in Ancient History. Such reading is done as is necessary to supplement the text. It is the purpose of this work gradually to give the student a broad view of history. Greek history occupies the first term; Roman, the second. Three hours throughout the year.

2. UNITED STATES HISTORY. A study of social life, economic conditions, political development, and historical literature. Lectures are occasionally given, and library work is required. Three hours throughout the year.

3. **ENGLISH HISTORY.** Racial traits, constitutional growth, social life at different stages, English conservatism, colonial systems, and pauperism are some of the topics discussed. Elective. Prerequisite, course 1. Three hours throughout the year.

4. **MODERN EUROPEAN HISTORY.** A study of European history from Charlemagne to the present time. Among the topics discussed are: the growth of monarchies, the French Revolution, formation of the German Empire, development of the Swiss Confederation, the Napoleonic wars. Three hours throughout the year.

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### LIBRARY WORK.

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MISS SMITH.

The subject includes the study of general reference books, such as encyclopedias, dictionaries, atlases, cyclopedias of special subjects, indexes to periodicals and general literature, handbooks of information and U. S. public documents with their special catalogues and indexes. Talks will be given on the classification and cataloguing of books in the library, explaining their arrangement on the shelves and the use of the card catalogue. The object of the course is to familiarize the student with the library and to teach him how to obtain information quickly. One hour throughout the year.

## MATHEMATICS.

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PROFESSOR LANGTON.

ASSISTANT PROFESSOR PARKER.

MR. RUDOLPH.

MR. WALKER.

1. ARITHMETIC. A thorough treatment of elementary arithmetic. Required of students not graduated from the district schools, who are admitted to the Manual Training Courses. Five hours throughout the year.

2. ARITHMETIC AND ALGEBRA.

(a) *Advanced Arithmetic*. Special attention is given to the nature, origin and development of number. The class recitation hour is devoted to thorough consideration of the fundamental processes of arithmetic, including contracted methods of multiplication and division, common and decimal fractions, factors and multiples, mensuration, the metric system of weights and measures, square and cube root, proportion, percentage and interest, and practical problems. First term.

(b) *Algebra*. A thorough treatment of the fundamental operations, use of parentheses, factoring, highest common factor, lowest common multiple, fractions, and simple equations. Second term.

Five hours throughout the year. One section gives special attention to Commercial Arithmetic.

3. ALGEBRA, GEOMETRY.

(a) *Higher Algebra*. After a brief review of the subjects treated in Course 2 (b), the following subjects are considered: simple equations, inequalities, involution and evolution, theory of exponents, radicals, quadratic equations, ratio and proportion, progressions, and binomial theorem. Wells, *New Complete Algebra*. First term.

(b) *Plane Geometry*. The general properties of polygons; problems of construction, and determination of areas; regular

polygons and circles, with problems in construction, and methods of determining the ratio of the circumference to the diameter; maxima and minima. Special attention is given to the development of the power of logical thinking, and of accuracy and conciseness of expression. Wells, *The Essentials of Geometry*. Second term.

Five hours throughout the year.

4. GEOMETRY, ALGEBRA, TRIGONOMETRY.

(a) *Solid Geometry*. Wells, *Geometry*. First third of year.

(b) *Advanced Algebra*. A continuation of Course 3 (a); includes a thorough drill in the most important principles of higher algebra. Second third of year.

(c) *Trigonometry*. The deduction of general trigonometric formulæ, the solution of plane and spherical triangles, and practice in the use of logarithmic tables. Lyman and Goddard, *Trigonometry*. Last third of year.

Five hours throughout the year.

5. ANALYTIC GEOMETRY, CALCULUS.

(a) *Analytic Geometry*. The analytic geometry of the straight line, the circle, and the conic sections, including a discussion of the general equations of the second degree, and some special examples in transcendental and higher plane curves.

(b) *Differential Calculus*. The development of the fundamental principles and formulæ of the differential calculus; applications to various problems in plane geometry and analysis, such as indeterminate forms, maxima and minima, curvature, expansions of functions in series, evolutes and involutes, and curve tracing.

(c) *Integral Calculus*. Integration of various forms; development of the formulæ of the integral calculus; application in rectification of curves, quadrature of plain and curved surfaces, cubature of volumes, etc. Elective. Prerequisite, course 4. Five hours throughout the year.

6. MODERN GEOMETRY. This course treats the most important theorems and examples connected with harmonics, anharmonics, involution, projection, including homology, and recipro-



cation. Cremona, *Projective Geometry*; Russell, *Treatise on Pure Geometry*; Laughlan, *Modern Pure Geometry*. Elective. Prerequisite, course 5. Five hours throughout the year.

7. DIFFERENTIAL AND INTEGRAL CALCULUS, ADVANCED COURSE. This course embraces the elements of the theory of functions of imaginary variables; the various methods of integration systematically treated; the elements of the theory of the elliptic functions; the mechanical and geometrical applications of the calculus treated more fully than in course 5; and some of the more important cases of differential equations. Todhunter, *Differential Calculus*, and Williamson, *Integral Calculus*. Elective. Prerequisite, course 5. Five hours throughout the year.

8. DESCRIPTIVE GEOMETRY. The representation and the solution of problems relating to geometrical magnitudes in space, including orthographic projections and development; projections of plane and solid intersections; shades and shadows; and applications to stereotomy, sheet-metal work, and other structural problems. Elective. Six hours throughout the year. Two credits.

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## MILITARY SCIENCE AND TACTICS.

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LIEUTENANT CAFFEY.

Military instruction at the College is not a matter of choice with the authorities or the students. The Congress of the United States requires this instruction in return for large appropriations; it is thus an obligation—an obligation in return for the advantages of free education.

The aim of the department is to qualify young men for positions as commissioned officers of volunteer forces. All able-bodied male students of the College *below Senior and above First Year* are enrolled in the Military Department.

A uniform must be worn by all students when at drill. Arrangements have been made by which the uniform can be ob-

tained through the Secretary of the College at actual cost, about fifteen dollars. The attention of students intending to enter college is called to the fact that this uniform has been found more serviceable than civilian clothes of the same price, and that all must be prepared to order the uniform when they enter.

The organization conforms to the company and battalion organization of the regular army. The officers and non-commissioned officers are selected after competitive examinations. In general the officers are taken from the higher college classes, the non-commissioned officers from the lower.

A cadet band is maintained under the immediate charge of the Director of the School of Music. It appears with the cadet battalion at parades, reviews and other ceremonies.

#### PRACTICAL.

*Four hours a week throughout the year. Required of all, except seniors and first year students. Infantry*—school of the soldier, squad, company and battalion. The ceremonies of guard mounting, parade and review; advance and rear guard; outposts; practice marches; target practice.

For target practice the college has excellent indoor and outdoor ranges. The U. S. government gives an ample allowance for ammunition.

#### THEORETICAL.

*One hour a week throughout the year.*

*First Year* (in the Military Department).

Infantry Drill Regulations.

Manual of Guard Duty.

*Second Year.*

Infantry Drill Regulations (Review).

A Military Primer.

Small Arms Firing Regulations.

*Third Year.*

Military Field Engineering.

Field Service Regulations.

Lectures on the Art and Science of War.

*Fourth Year.*

Military Law.

Lectures on the Art and Science of War.

The satisfactory completion of both the practical and the theoretical work prescribed for any one year entitles the student to one hour's credit.

## ORGANIZATION—1908-09.

Major, L. M. Winsor.

Adjutant, Chas. Laurenson.

Sergeant-Major, W. M. Ball.

Color Sergeant, J. T. Steed.

Drum Major, V. A. Sadler.

Captains—*Company A*, W. J. Crocker; *Company B*, W. L. Jones; *Company C*, H. T. Plant.

First Lieutenants—*Company A*, A. P. Monson; *Company B*, Melvin Smart; *Company C*, R. B. Curtis.

Second Lieutenants—*Company A*, W. B. Oldham; *Company B*, P. C. Passey; *Company C*, W. L. Peterson.

First Sergeants—*Company A*, A. E. Aldous; *Company B*, L. Westerholm; *Company C*, L. A. Stevens.

Sergeants—*Company A*, J. L. Peterson, D. F. Peterson; *Company B*, D. Sharp, R. W. Hoggan; *Company C*, H. Maughan, J. L. Montrose.

Corporals—*Company A*, J. A. Willey, C. L. Merrill, F. G. Whitehead, S. V. Tunks; *Company B*, J. Wheeler, D. Jennings, S. J. Major, W. W. Brown; *Company C*, L. O. Halgren, A. P. Jones, N. A. Ivie, Orene Nelson.

## MODERN LANGUAGES AND LATIN.

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PROFESSOR ARNOLD.

1. FIRST YEAR FRENCH. Chardenal, *French Grammar*, and Guerber, *Contes et Legendes*, form the basis of the grammatical and conversational work. Three or four modern texts are read, such as Dumas' *Les Trois Mousquetaires*, About's *Le Roi des Montagnes*, and Halevy's *L'Abbe Constantin*. Five hours throughout the year. Four credits.

2. SECOND YEAR FRENCH. Francois' *French Composition* is the basis of a grammatical review and of writing in French. Lavissee's *Histoire de France* is used as subject matter for conversation, while the work in reading consists in translating works of the more important of the nineteenth century authors. During the second term a weekly composition in French is required. Prerequisite, course 1 or an equivalent. Three hours throughout the year.

3. THIRD YEAR FRENCH. The object of the course is a systematic study of French literature with Doumic's *Histoire de la Literature Francaise* as basis. Weekly compositions in French will be required, based on outside reading. The class work will be the reading and discussion of as many of the plays of Racine, Corneille and Moliere as possible, with lectures in French by the instructor. The course may be taken with credit two years in succession, as it will alternate with work on the nineteenth century poets. Prerequisites, courses 1 and 2 or an equivalent. Three hours throughout the year.

4. SCIENTIFIC AND HISTORICAL FRENCH. Translation of monographs on scientific subjects by recent French writers as contained in standard French scientific magazines; sight reading and rapid translation of topics from French writers on history and economics. Prerequisites, courses 1 and 2 or an equivalent. Two hours throughout the year.

## SPANISH.

1. FIRST YEAR SPANISH. Giese, *First Year in Spanish*; Matzke, *First Spanish Readings*; Valdes, *Jose*; Alarcon, *El Capitan Veneno*. Optional with French or German in the Commercial Course. Five hours throughout the year. Three credits.

2. SECOND YEAR SPANISH. Ford, *Spanish Composition*; Picatoste, *Historia de Espana* as basis for conversation; rapid reading of such modern texts as Valera's *Comendador Mendoza*; Galdos, *Dona Perfecta* and *Electra*; Breton, *Quien es ella?*; and one classical play. Prerequisite, course 1. Three hours throughout the year.

## GERMAN.

1. FIRST YEAR GERMAN. Ball, *Elements of German* and Bernhardt, *German Composition* form the basis of the grammatical and written work. The work in reading begins with Wenckebach's *Glueck Auf*, and is followed by three or four easy texts. Several poems are memorized. Five hours throughout the year. Four credits.

2. SECOND YEAR GERMAN. Bernhardt, *German Composition* is finished and work in original German composition is begun. Andrea, *Erzaehlungen aus der deutschen Geschichte* is used as basis for conversation and foundation for future understanding of German literature. Many texts are rapidly read, selected from the works of Riehl, Sudermann, Wildenbruch, Freytag, Heine, and other nineteenth century authors, with one scientific text. Three hours throughout the year.

3. THIRD YEAR GERMAN. A systematic study of German literature is begun with Keller's *Bilder aus der deutschen Litteratur* as basis. As much as possible of the work of Lessing, Schiller and Goethe is read and discussed. Prerequisites, courses 1 and 2 or an equivalent. Three hour throughout the year.



4. SCIENTIFIC GERMAN. The work will consist of rapid reading of scientific texts with the study of cognates, beginning with Walther's *Meereskunde* and Lassar-Cohn's *Chemie im taeglichen Leben*, and followed by monographs by Cohn, Helmholtz, Dubois-Raymond, and other German scientists. Two hours throughout the year. Prerequisites, courses 1 and 2 or an equivalent.

### LATIN.

The following courses in Latin are offered to students in three year courses, and to students in college courses who have not presented parallel courses as entrance requirements:

1. FIRST YEAR LATIN. Collar and Daniel, *First Year Latin; Viri Romae*. Drill on essentials of Latin grammar; comparison with English grammar, acquiring of vocabulary; English words derived from Latin; selections for reading. Five hours throughout the year.

2. SECOND YEAR LATIN. Greenough, D'Ooge and Daniel, *Second Year Latin*; D'Ooge, *Latin Composition based on Caesar*; Bennett, *Latin Grammar*; selected readings from Part 1, *Second Year Latin*; an equivalent of four books from selections from Cæsar; oral and written composition. Attention is given to etymology of English derivatives and cognates; accuracy and facility in translation into idiomatic English; sight translation. Prerequisite, course 1. Five hours throughout the year.

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### MUSIC.

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PROFESSOR THATCHER.

MRS. LINNARTZ.

MR. CLARK.

MR. \_\_\_\_\_

The following courses in music are arranged with the two-fold idea of laying a sure foundation for professional work along

any of the lines of this art, and to fit the student for the proper application and fullest enjoyment of the classic compositions of famous composers. Theory of music as exemplified in the study of harmony, counterpoint and musical form, will be considered, and as far as possible urged upon the student in both vocal and instrumental departments. Ensemble work may be had in the quartette, choir, band, and orchestra organizations. These advantages, together with those furnished by free concerts and recitals, constitute the strongest features of a Conservatory Course and will be open to any and all students of the College.

*A certificate of graduation will be given upon the completion of any of the following courses:*

FOUR YEAR PIANO COURSE. Completion of regular four years' work as prescribed, together with one year of vocal music and one year of harmony.

FOUR YEAR VOCAL COURSE. Completion of four years' regular prescribed work, together with two years of piano and one year of harmony.

FOUR YEAR VIOLIN OR VIOLONCELLO COURSE. Completion of four years' regular prescribed work, together with two years of piano and one year of harmony.

FOUR YEAR COMPOSITION COURSE. Regular prescribed work, together with three years on piano, violin, cello, or cornet.

#### VOICE CULTURE AND ART OF SINGING.

FIRST YEAR. Breathing, study of vowel forms, elementary vocalization, easy songs.

SECOND YEAR. Vocalization, solfeggio songs.

THIRD YEAR. Vocal studies, songs, arias, solo parts in easy operas, first year harmony, piano.

FOURTH YEAR. Advanced studies, English classic songs, German and Italian songs, arias, piano, etc.

#### PIANOFORTE.

FIRST YEAR. Position, hand culture, rhythm, scales, elementary work from Gurlitt, Beyer, Czerny and others.

SECOND YEAR. Easy studies and sonatinas by Bertini, Clementi, Kuhlau, Kohler, Loeschorn; easy pieces.

THIRD YEAR. Studies by Czerny, Dorn, Hiller, Gobbaert, and Craemer, Sonatas by Mozart, Haydn and others; first year voice and singing.

FOURTH YEAR. Studies by Craemer, Kessler, Clementi, *Gradus ad Parnassum*, solo pieces by Schubert, Mendelssohn, Chopin, Raff and others; first year harmony.

#### ORGAN.

FIRST YEAR. A standard method, and easy studies and pieces.

SECOND YEAR. Parallels piano course; carefully selected pieces suitable for the organ.

#### VIOLIN.

FIRST YEAR. David School, Book I. Sitt Opus 35.

SECOND YEAR. David School, Book II. Studies by Kayser; easy solos and duets; orchestra practice; first year piano.

THIRD YEAR. Kreutzer, 42 Exercises; studies by Fiorilli; orchestra; second year piano.

FOURTH YEAR. Rode, 24 exercises; Rovilli, 12 exercises; Garinni, 24 exercises; Dont's *Gradus*; concertos, Viotti, Mendelssohn, etc.; orchestra; first year harmony.

#### VIOLONCELLO.

FIRST YEAR. Part of Kummer's method for Violoncello with easy pieces.

SECOND YEAR. Balance of Kummer's method; easy studies by Dotzauer; easy pieces; orchestra practice, first year piano.

THIRD YEAR. Studies by Dotzauer; pieces moderately difficult; cello parts to easy trios and quartettes; orchestra; second year piano.

FOURTH YEAR. Balance of studies by Dotzauer; pieces of more advanced grades; cello parts to trios, quartettes, etc.; orchestra; harmony.

#### CORNET AND OTHER BRASS INSTRUMENTS.

The course of study for these various instruments corresponds in general with that for string instruments.

#### MANDOLIN AND GUITAR.

FIRST TWO TERMS. First, second and third position; part of a standard method, and easy pieces.

LAST TWO TERMS. Balance of method; more advanced work and *ensemble* playing.

#### HARMONY AND COMPOSITION.

FIRST YEAR. Goetscius, *Tone Relations*; first year of piano or other instruments.

SECOND YEAR. Advanced harmony; simple counterpoint; melody writing; second year piano, violin, etc.

THIRD YEAR. Counterpoint; smaller forms; vocal and instrumental; third year piano, violin, etc.

FOURTH YEAR. Large forms; instrumentation.

#### CHOIR AND GLEE CLUBS.

Time devoted to practice; five hours a week for Choir, including Glee Clubs, counting towards graduation.

#### BAND AND ORCHESTRA.

Five hours a week will be devoted to this work, counting towards graduation.

In addition to the foregoing, a "Choir Leader's Class" will

be conducted by Director Thatcher, which, presupposing a fair knowledge of notation, keys, and intervals, will embrace the following: tone production as applied to the human voice, breathing, arrangement of choir, balance of parts, elements of time beating, reading, interpretation, etc.

# TUITION.

*For Term of Fifteen Weeks—Payable in Advance.*

(No entrance fee will be charged special students in music.)

## VOICE.

*First Year.* Class of three, one lesson a week .....\$ 7.50

*Second Year.* (Private Instruction).

One lesson a week ..... 15.00

*Advanced,* one lesson a week .....\$22.50

## PIANO.

*First Year.* Class of three; one lesson a week .....\$ 7.50

*Second Year.* Class of three; one lesson a week ..... 10.00

Private instruction; one lesson a week ..... 15.00

Private instruction; two lessons a week ..... 25.00

## REED ORGAN.

*First Year.* Private instruction; one lesson a week .....\$10.00

*Advanced.* Private instruction; one lesson a week ..... 15.00

## VIOLIN.

*First Year.* Class of three; one lesson a week .....\$ 7.50

*Second Year.* Private instruction; one lesson a week ..... 15.00

*Advanced.* Private instruction ..... 22.50

## VIOLONCELLO.

*Private Instruction.* One lesson a week. .... 10.00

## CORNET AND BAND INSTRUMENTS.

*Class Lessons.* One lesson a week .....\$ 7.50

*Private Instruction.* One lesson a week ..... 10.00



## MANDOLIN AND GUITAR.

One lesson a week.....	\$ 7.50
Two lessons a week .....	10.00

## HARMONY.

Class of three; two lessons a week .....	10.00
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## CHOIR LEADER'S CLASS.

Two lessons a week .....	\$ 7.50
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## REGISTRATION IN MUSIC WORK 1908-9.

Choir .....	60
Male Glee Club .....	22
String Quartette .....	4
Band .....	34
Orchestra .....	20
Mandolin and Guitar Club .....	16
Private Pupils .....	55
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	211
Names repeated .....	40
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Total number of persons .....	171

## PHYSICAL EDUCATION.

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PROFESSOR TEETZEL.

MISS STEWART.

It is the aim of the Department of Physical Education to foster hygienic habits among the students, and so direct their exercise that they may have a physical development fit to support and make efficient the mental development which they seek in attending the institution. This is accomplished, first, by giving them the needed opportunity for gymnastic exercises; second, by encouraging athletic games, thereby stimulating an interest in their physical efficiency and in the pleasure of physical activity; and, third, by giving them a guiding knowledge of the principles of physical education. All the work is based upon careful physical examinations.

### PHYSICAL EDUCATION FOR MEN.

1. Open to all male students of the institution. Three hours a week. One credit.

(a) *Gymnasium Exercises*. These consist of vigorous drills with dumb bells, Indian clubs, wands, etc., and gymnasium games under the supervision of the instructor.

(b) *Lectures*. The gymnasium work is supplemented by lectures on personal hygiene, the physiology of exercise, first aid to the injured, etc.

### PHYSICAL EDUCATION FOR WOMEN.

Two years of physical education are required of all women students of the College. The work of the courses is arranged, as far as possible, with reference to the needs of the individual student. The hygienic, corrective, and educative effects of exercise are sought in the arrangement of movements.

Students are required to wear full gymnasium costume, consisting of blouse, divided skirt and slippers. Costumes are ordered through the Secretary of the College and furnished to the student at actual cost, which is about \$3.50.

FIRST YEAR COURSE. The aim of this course is to overcome physical defects, to establish a correct carriage of the body, and to strengthen the muscles. The course consists of relaxing exercises, mat exercises, corrective and floor movements, adapted from the German and Swedish systems, exercises with light apparatus, marching, dancing, and games.

SECOND YEAR COURSE. A continuation of the first year course. The variety of movements is increased according to the ability and progress of the student. Practice in basket ball, hockey and tennis.

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## PHYSICS.

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PROFESSOR WEST.

1. ELEMENTARY PHYSICS. A first course in the elements of Physics, presented mainly from the experimental standpoint. The lectures are illustrated by numerous demonstrations, and students spend two periods a week in the laboratory. Millikan and Gale, *A First Course in Physics*. Three hours throughout the year.

2. GENERAL PHYSICS. Lectures, demonstrations, recitations and student laboratory work covering the whole field of Physics as far as the time will permit. Watson, *A Text Book of Physics*. Elective. Four hours throughout the year.

3. MECHANICS, MOLECULAR PHYSICS, AND HEAT. Class room and laboratory work covering selected chapters from *Mechanics and Heat*; also the kinetic theory, capillarity, solution, electrolysis and elementary thermodynamics. Elective. Three hours throughout the year.

4. ELECTRICITY, LIGHT AND SOUND. Of the same grade and conducted in the same way as course 3. In addition to the selected work in electricity and sound, diffraction, dispersion, interference, and polarization of light will be taken up, as well as radioactivity and the electron theory. Elective. Three hours throughout the year.

## ZOOLOGY AND ENTOMOLOGY.

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PROFESSOR TITUS.

ASSISTANT PROFESSOR PETERSON.

MR. HOFF.

1. **ELEMENTARY ANATOMY AND PHYSIOLOGY.** The structure and function of different parts of the human body, especial attention being given to the principles that underlie the care of the body. Special lectures are given on diet, ventilation, exercise, use of medicines, and other hygienic topics. The laboratory work familiarizes the student with the human skeleton as compared with that of other animals, and with the microscopic study of tissues which is taken up by means of prepared slides. Two recitations and one laboratory period throughout the year. Two credits.

2. **GENERAL ZOOLOGY.** In this course the student begins with the lowest invertebrates, a typical example of each group being studied in detail and dissected in the laboratory, and the related forms discussed. The higher forms are taken up in their natural order, the invertebrates being studied the first, and the vertebrates the second term. Two lectures and one laboratory period throughout the year. Three credits.

3. **BIOLOGICAL LECTURES.** The principles of variation, selection, adaptation, heredity and kindred subjects in their relation to evolution. Especial attention is paid to the recent discoveries in the laws of heredity, and the fundamental principles underlying animal breeding. Elective. Prerequisite, Course 2. Two lectures a week throughout the year. Two credits.

4. **ADVANCED PHYSIOLOGY.** The phenomena of life, chemical composition of the body, physiology of the cell, nutrition, circulation, nervous system and sense organs, and other related subjects are discussed. Elective. Prerequisite, Zoology 1 and Chemistry 1. Three hours, second term. Three credits.

5. **HISTOLOGY.** Lectures on the development of the elemen-

tary tissues and the formation and functions of the organs and tissues of the body. Prepared slides of human and other vertebrate tissues are used in the laboratory. The student becomes familiar with the methods of examination and permanent preparation of tissues. Three or five credits.

6. EMBRYOLOGY. The general principles of animal development, beginning with the cell and taking up the formation of the embryo and foetal membranes in the vertebrates. Special attention is paid to the development of the chick and the higher mammals. Prerequisite, Course 2. Two recitations and one laboratory period, one term. Three credits.

7. ADVANCED VERTEBRATE ZOOLOGY. Students in this course take up the comparative anatomy of the higher vertebrates and the classification of the more common forms of the intermountain region. Elective. Prerequisite, Course 2. One recitation and one laboratory period, one term. Two credits.

8. ECONOMIC ORNITHOLOGY. The food-habits and classification of the common birds and their general relations to agricultural interests receive careful attention. Elective. One recitation and one laboratory period, one term. Two credits.

9. ANIMAL PARASITES. This course includes a consideration of the principal external and internal parasites of man and the domestic animals. Their classification and identification, and remedial and preventive measures for their control are fully considered. Two recitations and one laboratory period one term. Three credits.

10. ADVANCED SYSTEMATIC ENTOMOLOGY. Research work in entomology will be given to students specializing in that subject. They will be expected to take up some group of insects and study their classification and relations to other groups and to examine the literature relating to the subject. Elective. Three or five credits.



## EXTENSION DEPARTMENT.

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PRESIDENT WIDTSOE.  
 PROFESSOR MERRILL.  
 PROFESSOR BALL.  
 PROFESSOR HUNTINGTON.  
 PROFESSOR HOMER.  
 PROFESSOR FREDERICK.  
 PROFESSOR TITUS.  
 PROFESSOR CAINE.  
 ASSISTANT PROFESSOR WOODWARD.  
 MISS LOVE.  
 MR. TURPIN.  
 MISS MCKAY.

The College Extension department is organized with the view of taking up those questions which affect the life of the rural community. It is the aim of the department to stimulate an interest in attractive and healthful home surroundings, to create a desire for neat and well ordered farmsteads, and to seek by every legitimate means to direct the labor expended on the farm in an intelligent way. The work of the Department consists of answering questions by correspondence, giving lectures at farmers' institutes, conducting farmers' schools, lecturing before teachers' institutes and commercial clubs.

During the past year the College co-operated with the various railroads in the state and a special Farmers' Institute Train visited every town and village adjacent to the railroads. Two hundred and fifteen sessions were held with a total attendance of over 18,000 people.

During the coming year thirteen schools of one week's duration are to be held in the following counties of the state.

## WEEK BEGINNING

## COUNTIES

Nov. 22, 1909

Washington

Nov. 29, 1909

Iron

WEEK BEGINNING	COUNTIES
Dec. 6, 1909	Millard
Dec. 13, 1909	Beaver
Jan. 10, 1910	Juab
Jan. 17, 1910	Sevier
Jan. 24, 1910	San Pete
Jan. 31, 1910	Boxelder and Davis
Feb. 7, 1910	Utah
Feb. 14, 1910	Emery
Feb. 21, 1910	Weber and Morgan

Institutes of two and three days' duration are to be held in the remaining counties, during the year. Wherever the schools are held there must be a guarantee that at least 100 men and 50 women will be in attendance who will together pay a fee of \$125.00 to assist in defraying the expenses.

The subjects discussed at these schools will meet the needs of the various localities where they are held. At these schools separate sessions are held for the men and the women in the forenoon and the afternoon, these sessions being devoted to lectures and demonstrations, on the practical problems of the farm and home. The evening sessions, at which there are lectures on subjects of general interest to the community at large, are held conjointly.

#### AGRICULTURE.

The subjects discussed at the men's sessions include soils, field crops, farm animals, dairying, poultry, irrigation, arid farming, horticulture, insect pests, diseases of farm animals, farmers' organization, marketing farm products, etc.

#### DOMESTIC SCIENCE.

Improvements in methods of housekeeping have not kept pace with the introduction of improved machinery on the farm, and the farmers' wives and daughters are beginning to realize that the time has come when the kitchen at least must be remodelled and many appliances and conveniences added. Not only

are we offering courses in this line of work at the College, but we are willing to bring those courses to the doors of those who cannot leave their homes.

In connection with the farmers' schools a week's school in Domestic Science is given for women. Practical lectures on such subjects as "Bread making," "Home decorations," "House plants," "Nursing the sick in the home," "Cheese and butter making," will be given. Demonstrations on meats, soups, sauces, salads, creams, jellies, cakes, etc., will form a very important phase of the work. The benefits attending these schools are varied; such as the exchanging of ideas and learning how to do common everyday duties in a simple manner; enabling us to economize in the most precious commodity we possess, viz., time. We are also enabled to learn why we do certain things, and how to do them from a scientific standpoint.

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### WINTER COURSES.

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In order to be of the greatest service to the greatest number of people the College offers, and has offered annually since its opening year, a series of winter courses. Hundreds of persons, young and old, men and women, unable to attend school at any other time, have in the past taken advantage of this opportunity, and the number increases each winter. These courses, of varying periods of duration, furnish instruction in all the branches of Agriculture, Domestic Science, and Arts, Mechanic Arts, Commerce, and Forestry. In addition the student is permitted to take any course or courses in any of the other departments for which he may be prepared. All the work is elective. The registration fee is \$2.50. Send for special circular ready in December.

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### SUMMER SCHOOL.

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The College maintains, as an integral part of its work, a summer session, beginning on the first Monday of June, and con-

tinuing for five weeks. Every department of the College is represented, the courses of instruction being arranged to meet the peculiar needs of summer students. For the benefit of teachers, special courses are provided in pedagogy, psychology, sloyd, and nature study, in addition to the regular work in Agriculture, Domestic Science, etc. College students desiring to make up conditions or prepare for advanced work are given all assistance possible. The entire equipment of the institution is available for the summer session, and every care is taken to preserve the standard and the spirit of the college. No admission requirements are prescribed, but students in all departments are directed by instructors to those courses in which they may pursue work to the best advantage. No one is advised to elect more than two courses. Students will receive such credits on the College register as the quality and amount of work done may warrant. Arrangements have been made with county superintendents throughout the State to accept Summer School credits in individual subjects in lieu of examination. In addition to the routine work of the session, a course of daily lectures is provided, appealing both to teachers and to the general public, and covering a wide range of interesting subjects. An entrance fee of \$2.50 is charged for each course for which the student registers. Board and rooms can be secured throughout the city at the usual prices. Special Summer School Circular will be sent on request.

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### NORMAL TRAINING.

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For the purpose of providing specially trained teachers of domestic science and arts, agriculture, and mechanic arts, arrangements have been made whereby the graduates of the State Normal School of the University may enter the degree courses of the Agricultural College and there receive technical work in domestic science and arts, agriculture, and mechanic arts. All the work done in the State Normal School will be credited the candidates for the professional degree.

Graduates from the degree courses in Domestic Science and Arts, Agriculture, and Mechanic Arts of the Agricultural College will be given the regular normal certificate upon the completion of one year of professional work at the State Normal School.

Graduates from the various Manual Training Courses and other short courses of the Agricultural College will be entered for the professional work of the Normal School, and will be given full credit for the work done at the Agricultural College.

Instruction in elementary agriculture will be given to students of the State Normal School, every Monday, by the extension department of the Agriculture College.

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### HONORS IN SCHOLARSHIP.

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The following students were selected from the College Roll as deserving of some special distinction for high achievements in scholarship. On the last day of school they were, accordingly, publicly honored by receiving either a "College A" or "Honorable Mention" for Scholarship.

The following received "A.:"

Ernest Carroll.  
Vern Clark Woolley.  
Percy Harry Barrows.  
Lucile Lee.  
Amelia Manning.  
Byron Alder.

The following received "Honorable Mention.:"

Lofter Bjarnason.  
Alfonso Laker Cook.  
Robert James Evans.  
Veda Hunsaker.  
Charles Terry Hirst.  
Stonewall Jackson Major.  
Winnifred Smith.



## Alumni Association.

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The U. A. C. Alumni Association was organized in June, 1899, and embraces all who hold degrees from any of the courses in the College. In the first two classes, 1894 and 1895, three students were graduated, with the degree of Bachelor of Civil Engineering (B. C. E.), but since that time the only degree given is that of Bachelor of Science (B. S.), the particular course being specified in the diploma.

The Association now numbers 140 living members. Three members have died: Bernard Dougall '94, Mrs. Anna Sponberg McCarty '97, and John Simon Baker '99. The graduates of the U. A. C. have been uniformly successful in their careers. Many of them occupy very responsible positions and all of them are prominent and respectable members of their respective communities. Of the forty-eight living Alumnae, eighteen are married and twenty are engaged in educational work throughout the West. Most of these twenty are teaching in colleges and secondary schools, particularly in departments of domestic science and arts. The U. A. C. alumnae have founded and developed nearly all such departments in this State, and many in surrounding states. Others have become teachers in commerce and general science.

Of the Alumni thirty-four of the 102 living members are engaged in teaching, and all but one or two are specialists, teaching in colleges or secondary schools. Many are principals of schools, and heads of departments. The remaining sixty-eight are devoting their energies to practical work of great variety. A large number are employed by the different departments of the U. S. Government Service, especially those of Agriculture and of The Interior. These positions are very remunerative, and desirable from every point of view, and our graduates have

given the highest satisfaction. Others are employed by the State, many by private companies and corporations, and a large number are in business for themselves.

Thirty-seven of the U. A. C. Alumni have done post-graduate work at other schools. The list of schools attended embraces Harvard, Cornell, Columbia, Chicago, Ames, Ann Arbor, U. of Colorado, U. of Nebraska, U. of Illinois, Leland Stanford, Jr., and various technical schools.

The first number of the U. A. C. Alumni Annual is in press. It contains a history of the work of each member since graduating and demonstrates more clearly than anything else could do, the efficiency of the education given by the U. A. C. It is copiously illustrated. The Association hopes to publish an Annual each year until such time as an Alumni Quarterly may be attempted.

#### OFFICERS FOR 1909-10.

Christian Larsen, '96, President.

Lewis A. Merrill, '95, First Vice-President.

Eunice Jacobson, '08, Second Vice-President.

A. C. Nebeker, '03, Third Vice-President.

J. L. Coburn, '05, Secretary and Treasurer.

# Fifteenth Annual Commencement.

JUNE, 1908.

## GRADUATES.

WITH DEGREES.

*Bachelor of Science in Agriculture.*—George Richard Hill, Springville, Utah; Christian Nephi Jensen, Ephraim, Utah.

*Bachelor of Science in Domestic Science.*—Verna Pearl Bowman, Ogden, Utah.

*Bachelor of Science in Commerce.*—Alva Hansen, American Fork, Utah; Hans Ephraim Jensen, Ephraim, Utah.

*Bachelor of Science in General Science.*—Russell King Homer, Logan, Utah; Eunice Estella Jacobsen, Logan, Utah; William Peterson, Logan, Utah; Eugene Santschi, Salt Lake City, Utah; William Lawrence Walker, Eden, Utah.

*Bachelor of Science in Mechanical Engineering.*—Heber Carver, Ogden, Utah; Ellis Hudman, Slaterville, Utah.

WITH CERTIFICATES.

*Agriculture.*—William Wallace Brown, Logan, Utah; Christian A. Peterson, Newton, Utah.

*Domestic Science.*—Norma Fay Justesen, Deseret, Utah; Anna Mathisen, Logan, Utah.

*Commerce.*—Junius James Andrews, Logan, Utah; Michael Andrews, Jr., Logan, Utah; Ray Barker Curtis, Victor, Idaho; Harley Greaves, Preston, Idaho; Barney Justesen, Deseret, Utah; Lettie Lund, Logan, Utah; Joseph Alma Marley, McCammon, Idaho; John Devere Morgan, Collinston, Utah; James Dunbar Pence, Mountainhome, Idaho; Willard Larsen Peterson, Petersburg, Utah; Henry Thomas Plant, Richmond, Utah; Vera Evelyn Taylor, Ogden, Utah; George Nehemiah Weston, Logan, Utah.

*Domestic Arts.*—Emma Frederickson, Salt Lake City, Utah; Annabelle Fuller, Eden, Utah.

*Mechanic Arts.*—Alma Beck, Spanish Fork, Utah; Edgar Bently Mitchell, Logan, Utah; Charles Henry Olsen, Crescent, Utah; Frank Davis Thatcher, Logan, Utah.

# Sixteenth Annual Commencement.

JUNE, 1909.

## GRADUATES.

### WITH DEGREES.

*Bachelor of Science in Agriculture.*—Earl Bennion, Murray, Utah; Ernest Carroll, Orderville, Utah; Philip Vincent Cardon, Logan, Utah; William Parley Day, Fillmore, Utah; Robert James Evans, Lehi, Utah; Charles Elliott Flemming, Logan, Utah; Julius Hall Jacobson, Logan, Utah; Daniel Lambert Pack, Kamas, Utah; George Melvin Turpin, Murray, Utah; Cadmus Wallace, Logan, Utah.

*Bachelor of Science in Domestic Science.*—Jessie Anderson, Toquerville, Utah; Ethel Lee, Hoytsville, Utah; Lizzie O. McKay, Ogden, Utah; Ina Stratford, Logan, Utah.

*Bachelor of Science in General Science.*—Hugh Robert Adams, Logan, Utah; Leon Fonnesbeck, Logan, Utah; Nellie Hayball, Logan, Utah; Ernest Prior Hoff, Logan, Utah; John Raymond Horton, Ogden, Utah; Edward Haslam Walters, Logan, Utah.

### WITH CERTIFICATES.

*Agriculture.*—Howard Maughan, Logan, Utah.

*Domestic Arts.*—Cora Elma Greenhalgh, Logan, Utah; Viola Mary Hale, Logan, Utah; Rachel Cecelia Jones, Logan, Utah.

*Commerce.*—Hervin Bunderson, Logan, Utah; George Cahoon, Logan, Utah; Louise Dunlop, Logan, Utah; Levon Oscar Halgren, Logan, Utah; Wilford Fred Heyrand, Providence, Utah; Berdie Eleanor Johnson, Salt Lake City, Utah; Sarah Carolyn Johnson, Salt Lake City, Utah; Frank William Laurenson, Downey, Idaho; Alfred Peter Monson, Pleasant Grove, Utah; Melvin Shrives Smart, Salt Lake City, Utah; Samuel Van Tunks, Logan, Utah; Raymond Waters, Logan, Utah.

*Mechanic Arts.*—Byron Alder, Manti, Utah; Sidney Edgar Aldous, Huntsville, Utah.

# Catalogue of Students.

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In the following list A. stands for Agriculture; D. S. for Domestic Science; C. for Commerce; M. A. for Mechanic Arts; G. S. for General Science; M. for Music.

## GRADUATES.

Hansen, Alva (A) .....	American Fork
Love, Hazel (M) .....	Salt Lake City

## SENIORS.

Adams, Robert Hugh (G. S.) .....	Logan
Anderson, Jessie (D. S.) .....	Toquerville
Bennion, Earl (A) .....	Murray
Cardon, Philip Vincent (A) .....	Logan
Carroll, Ernest (A.) .....	Orderville
Day, William Parley (A.) .....	Fillmore
Eager, Lucy (D. S.) .....	Salt Lake City
Evans, Robert James (A.) .....	Lehi
Fleming, Charles Elliott (A.) .....	Logan
Fonnesbeck, Leon (G. S.) .....	Logan
Hayball, Nellie (G. S.) .....	Logan
Hoff, Ernest Prior (G. S.) .....	Logan
Horton, John Raymond (G. S.) .....	Ogden
Jacobson, Julius Hall (A.) .....	Logan
Jessup, Elon H. (G. S.) .....	Salt Lake City
Lee, Ethel (D. S.) .....	Hoytsville
McKay, Lizzie Odette (D. S.) .....	Ogden
Pack, Daniel Lambert (A.) .....	Kamas
Stratford, Ina (D. S.) .....	Logan
Turpin, George Melvin (A.) .....	Murray
Wallace, Cadmus (A.) .....	Logan
Walters, Edward Haslam (G. S.) .....	Logan

## JUNIORS.

Aldous, Alfred Evan (A.) .....	Ogden
Allred, Rodney Chase (A.) .....	Lehi
Ballantyne, Alando Bannerman (A.) .....	Logan



Barrows, Percy Harry (A.)	Logan
Bartlett, Helen (D. S.)	Salt Lake City
Bennion, Ethel (D. S.)	Taylorsville
Curtis, Ray Barker (C.)	Victor
Dixon, Veda (D. S.)	Payson
Grue, Joseph (G. S.)	Logan
Hirst, Charles Terry (G. S.)	Logan
Jones, William Leroy (A.)	Wellsville
Kerr, Coral (D. S.)	Logan
Lewis, Agnes (D. S.)	Coalville
Lloyd, Orson Gunnell (A.)	Logan
McOmie, Alexander M. (A.)	Lehi
Manning, Amelia (D. S.)	Slaterville
Morrell, Margaret (D. S.)	Logan
Nibley, Anna (D. S.)	Logan
Oldham, William Brown (A.)	Paradise
Parrish, Clara (D. S.)	Centerville
Pence, James Dunbar (C.)	Mountain Home, Ida.
Peterson, Dean Freeman (A.)	Scipio
Peterson, Erastus (A.)	Richfield
Peterson, Willard Larsen (C.)	Mendon
Perry, Susannah (D. S.)	Cedar City
Riter, William Corlett (A.)	Logan
Sadler, Vincent Alff (A.)	Salt Lake City
Smith, Winnifred Irene (D. S.)	Logan
Stewart, James Haslam (A.)	Logan
Stewart, Robert Haslam (A.)	Logan
Winsor, Luther Merkins (A.)	Enterprise
Wyatt, Franklin Archibald (A.)	Wellsville

SOPHOMORES.

Andrews, Junius James (A.)	Logan
Andrews, Michael John, Jr. (C.)	Logan
Ball, Wilbur Mansfield (A.)	Logan
Bowman, Albert Elijah (A.)	Ogden
Brossard, Edgar Bernard (G. S.)	Logan
Brown, Frank Martin (A.)	Liberty, Ida.
Brown, Robert Bruce (A.)	Liberty, Ida.
Brown, William Wallace (A.)	Liberty, Ida.
Burke, Asahel Woodruff (A.)	Cedar City
Cook, Lashbrook Laker (A.)	Garden City

Crafts, Elmer (A.)	Cedar Valley
Crocker, Walter James (A.)	Ogden
Dalton, Alexander Perry (A.)	Willard
Egbert, Archie (A.)	Logan
Egbert, Ivan (A.)	Logan
Ford, Joseph Victor (A.)	Cedar City
Froerer, Fred (A.)	Eden
Gurgar, Anant Madhov (A.)	India
Hatch, Georgia Vivian (G. S.)	Logan
Irons, Joseph Golden (A.)	Nephi
Jennings, David (A.)	Hinckley
Jensen, Lucile (D. S.)	Brigham City
Knapp, Alma J. (A.)	Logan
Low, Franklin David (A.)	Beaver
Mathisen, Anna (D. S.)	Logan
Maughan, Merrill (G. S.)	Wellsville
Merrill, Charles Leo (A.)	Richmond
Morrison, George L. (A.)	Logan
Paddock, John Stephens (A.)	Logan
Peterson, Ella (D. S.)	Ogden
Peterson, Jesse Larsen (A.)	Petersboro
Plant, Henry Thomas (C.)	Richmond
Quayle, William Littlefair (A.)	Logan
Robinson, Earl (A.)	Richmond
Robinson, David Earl (A.)	Logan
Sessions, James Wiley (A.)	Logan
Stratford, Alfred Edgar (A.)	Ogden
Tovey, James Cyril (G. S.)	Logan
Wheeler, Jerome (A.)	Ogden
Whitehead, Frank George (A.)	St. George
Willey, Joseph Angus (A.)	Layton
Woolley, Vern Clark (G. S.)	Grantsville
Wrigley, Robert Lecourn (A.)	American Fork

## FRESHMEN.

Adair, Wallace Hogan (A.)	Orderville
Allen, Merle (A.)	Cove
Anderson, Andrew (G. S.)	Salt Lake City
Barrett, Adeline Patti (C.)	Logan
Batt, William Brazen (A.)	Logan
Bell, Thomas Ray (C.)	Richmond

Bjarnason, Loftor (C.)	Logan
Bryant, Charles J. (M. A.)	Cedar City
Busby, Clifford George (A.)	Salt Lake City
Cahoon, Theresa (D. S.)	Murray
Caine, George Ballif (A.)	Logan
Clemenson, Wendell Lapsley (G. S.)	Logan
Coburn, Elmo Preston (A.)	Wellsville
Cooley, Abraham C. (A.)	Mendon
Costley, Grant (A.)	Logan
Daniels, Virginia (D. S.)	Logan
Dixon, Flintoff Clyde (A.)	Payson
Dunlop, Louise (C.)	Logan
Ellis, James Frank (A.)	Pleasant View
Eskelson, Oscar Edwin (A.)	Woods Cross
Evans, Thomas Jordan* (G. S.)	Brigham City
Goodwin, Earl (G. S.)	Logan
Graham, Archie J. (A.)	Logan
Halgren, Levon Oscar (C.)	Logan
Hawley, Charles Byron (A.)	Central
Heyrand, Wilford Fred (C.)	Providence
Hoggan, Robert Walter (A.)	Manti
Holden, James (A.)	Logan
Izatt, Angus (A.)	Logan
Holmes, David Whittaker (C.)	Logan
Hyde, Clara (D. S.)	Logan
Jensen, Sylvia (D. S.)	Logan
Johnson, Berdie Elenor (C.)	Salt Lake City
Johnson, Sarah (C.)	Salt Lake City
Jones, Inez (G. S.)	Logan
Jones, Jenkins William (A.)	Logan
Knighton, Lynn K. (A.)	Gunnison
McCune, Ross Hamilton (A.)	Ogden
Major, Stonewall Jackson (A.)	Ogden
Martineau, Bryant Sherman (A.)	Logan
Martineau, Vere L. (A.)	Logan
Monson, Alta Lavene (D. S.)	Logan
Morrell, Winnifred (D. S.)	Logan
Nelson, Anton (G. S.)	Honeyville
Newey, John Mathews (G. S.)	Ogden

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\*Deceased.

Porter, Ralph (G. S.)	Morgan
Ralph, Ephraim Thomas (A.)	Brigham City
Rasmussen, Aaron Frederick (C.)	Clarkston
Richardson, Lester Amon (A.)	Ogden
Rigby, Elmer Clark (G. S.)	Newton
Sharp, David (A.)	Vernon
Smart, Melvin (C.)	Salt Lake City
Stevens, Leroy A, (C.)	Logan
Tarbet, Florence (G. S.)	Logan
Taylor, Marion (C.)	Logan
Thain, Wilbur (C.)	Logan
Tunks, Samuel Van (C.)	Logan
Turner, Simpson Montgomery (A.)	Logan
Tuttle, Albert M. (A.)	Manti
Voorhees, Henry Isaac (A.)	Manti
Watkins, Thomas Doxey (A.)	Ogden
Wendelboe, Diamond (G. S.)	Logan
Wennergren, Oscar (A.)	Logan
Westerholm, Ludwig (C.)	Ivers, Idaho
White, Varien C. (A.)	Logan
Webb, Alma J. (A.)	St. George

## SPECIALS.

Allen, Alben Ethan (G. S.)	Millville
Allen, Marvel (G. S.)	Cove
Armstrong, Lucy (G. S.)	Logan
Ball, Mrs. Mildred (D. S.)	Logan
Barber, Marie (G. S.)	Logan
Bowen, Edith (G. S.)	Logan
Cardon, Gretta (M.)	Logan
Carlyon, Elizabeth (G. S.)	Minnesota
Carter, Wesley J. (M.)	Dewey
Clark, Edward J. (G. S.)	Logan
Cole, Ira Arnold (G. S.)	Logan
Crookston, Jean (D. S.)	Greenville
Dun, O. S. (G. S.)	Logan
Egbert, Roy Samuel (M. A.)	Logan
Evans, T. W. (M.)	Garland
Farrell, Lorraine (G. S.)	Logan
Frew, William Amos (M. A.)	Logan
Hall, Mrs. Olive H. (G. S.)	Eldwood

Hall, W. E. (G. S.)	Eldwood
Hansen, Anna (G. S.)	Ogden
Harding, George (G. S.)	Logan
Hart, Lucille (M.)	Logan
Houtz, Pearl (G. S.)	Salt Lake City
Jensen, Ethel (M.)	Logan
Johnston, Donald K. (M.)	Logan
Jones, Mamie (G. S.)	Logan
Jones, Rose Anna (G.S.)	Logan
King, Priscilla (G. S.)	Logan
Little, Dana Duncan (A.)	Logan
McAlister, Caroline (D. S.)	Logan
Molyneaux, Alma (G. S)	Logan
Nebeker, Luella (M.)	Logan
Nebeker, Ruby (G. S.)	Logan
Perry,, Abner (M. A.)	Cedar City
Peterson, John H. (G. S.)	Smithfield
Peterson, Mattie O. (G. S.)	Logan
Read, Melvin (G. S.)	Marion, Idaho
Saxer, Arthur H. (G. S.)	Logan
Shaw, Lela (M.)	Corinne
Shipley, William (G. S.)	Paradise
Smalley, Mary (G. S.)	Logan
Smith, Willis A. (G. S.)	Logan
Simonds, Lillian (G. S.)	Logan
Thomson, George M. (G. S.)	Richmond
Turpin, Mrs. Mabel (D. S.)	Logan
Wade, Jennette (D. S.)	Ogden
West, Josephine (D. S.)	Ogden
Whiting, Alice (C.)	Logan
Williamson, May (G. S.)	Logan
Woodbury, George J. (A.)	St. George

## AGRICULTURE.

### THIRD YEAR.

Maughan, Howard	Logan
Nebeker, Lee	Willard
Olsen, John K.	Ephraim

### SECOND YEAR.

Aldous, Clarence M.	Huntsville
Allen, Cliff	Smithfield



Bell, Clyde .....	Glenwood
Benson, Joseph Guy .....	Logan
Borgeson, Andrew Alvin .....	Santaquin
Brossard, Rolland Elmer .....	Logan
Brunker, Norton .....	Willard
Chipman, Thomas Lester .....	American Fork
Cook, Alfonso Laker .....	Garden City
Coombs, Frederick Thomas .....	Fielding
Crockett, Vernon Winsor .....	Logan
Dalton, William Shanks .....	Willard
Francis, Don .....	Logan
Hansen, Alma Wilford .....	Logan
Hansen, Henry Lloyd .....	American Fork
Haws, Wesley Walter .....	Logan
Hubbard, John Clark .....	Willard
Hughes, Rowland .....	Logan
Hunsaker, Horace Neeley, .....	Honeyville
Hunsaker, LeGrand .....	Honeyville
Jones, Albert Edwin .....	Logan
Kearns, Terrance Melrose .....	Gunnison
Kjar, Clinton .....	Manti
Knudson, William Warren .....	Brigham
Martineau, Charles Freeman .....	Logan
Nelson, Alexander Morgan .....	Logan
Palmer, Errol Wallace .....	Logan
Pond, Rufus Rolland .....	Lewiston
Pond, Zera Whittle .....	Lewiston
Ricks, Ezra, Jr. ....	Benson
Smith, Heber Lawrence .....	Logan
Waugh, William Francis .....	Salt Lake City
White, LeRoy Davis .....	Paradise
Woolley, William George .....	Salt Lake City
Wright, Leroy .....	Logan

## FIRST YEAR.

Allred, Aaron .....	Lehi
Allred, Rudgar van Buell .....	Lehi
Anderson, Hans .....	Greenville
Bagley, David .....	Charleston
Bell, Floyd .....	Glenwood
Bell, Ivan Ernest .....	Glenwood

Beirdneau, Albert .....	Logan
Beus, Heber Hill .....	Hooper
Brigham, Ray Elmo .....	Cornish
Caine, Alfred Ballif .....	Logan
Caine, Arthur Hugh .....	Logan
Carlisle, Heber John .....	Logan
Carlyle, John Thomas .....	King
Cartwright, John Albert .....	Beaver
Cluff, Harold Harvey .....	Salt Lake City
Crane, Herod .....	Salina
Grawford, Grant Jedediah .....	Manti
Crookston, Robert Burns .....	Greenville
Dean, Jay H. ....	Salt Lake City
Dunford, Carlos LeRoy .....	Salt Lake City
Ellis, Alma LeRoy .....	Pleasant View
Eliason, Solomon Fred. ....	Logan
Forbes, John Phillip .....	Layton
Frew, Eugene .....	Hooper
Goodwin, Charles Henry .....	Logan
Greenhalgh, Henry Alonzo .....	Santaquin
Griffin, Amos R. ....	Newton
Hampton, Elliott Brigham .....	Salt Lake City
Hansen, Peter .....	Dewey
Hatch, Wilford Woodruff .....	Woods Cross
Hicks, Edward Norton .....	Salt Lake City
Holden, George H. ....	Logan
Holmgren, Edwin John .....	Bear River City
Hougaard, Wilford Ray .....	Salt Lake City
Ivie, Norval Amos .....	Salt Lake City
Jensen, Elmer Christian* .....	Sandy
Kearl, Ernest Heber .....	Smithfield
King, William Edson .....	Ferron
Knighton, Ross K. ....	Gunnison
Lee, Fay Warren .....	Hoytsville
Lemmon, Henry J. ....	Logan
Livingston, Abraham .....	Salt Lake City
McCloy, George .....	Hooper
McCombs, Ezra .....	Logan
Madsen, Archie Ray .....	Morgan

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\*Deceased.

Matthews, Leonard Beaumont .....	Pleasant View
Miller, James I. ....	Newton
Morrell, Thomas Heber .....	Logan
Morrison, Joseph A. ....	Logan
Nebeker, Delbert .....	Lake Town
Nelson, Gus Andrew .....	Logan
Nelson, Olif Henry .....	Logan
Nielson, Hyrum Carl .....	Logan
Orme, Gilbert Charles .....	Tooele
Peart, John Kenneth .....	Farmington
Pendleton, Frank .....	Logan
Parry, Foster .....	Logan
Price, Robert Leatham .....	Wellsville
Rasmussen, John .....	Geneva
Rees, Guy Lester .....	Benson
Santchi, Harvey .....	Salt Lake City
Schwanevelt, Joseph Hyrum .....	Logan
Sharp, John Ajax .....	Vernon
Spalding, Van D. ....	Salt Lake City
Southworth, Walter .....	Logan
Swain, Joseph F. ....	Charleston
Tuft, John Wells .....	Centerfield
Turner, George Cleveland .....	Logan
Turner, Lyman .....	Logan
Walker, Vance Dermont .....	Mendon
Whitehead, Chester Arthur .....	St. George
Whitesides, John Morris .....	Layton
Winsor, Walter Fay .....	Enterprise
Willie, Allen Leroy .....	Mendon

## WINTER COURSE.

Adams, Floyd .....	Logan
Bingham, William J. ....	Logan
Bingham, Lewis .....	Logan
Brown, Harry .....	Bear River City
Chugg, Ezra Albert .....	Providence
Chugg, Nathaniel Benjamin .....	Providence
Clark, Ernest Ephraim .....	King
Cronquist, Elam .....	Greenville
Endo, Tirji .....	Ogden
Fielding, Frank Downs .....	Logan

Grace, John William .....	Nephi
Grover, Napoleon .....	Logan
Hammond, Nathaniel Robinson .....	Providence
Jensen, Aaron LeRoy .....	Geneva
Lloyd, Ellis .....	Logan
Lewis, Frank .....	Vernal
Maughan, Daniel Hill .....	Wellsville
Newman, Silas Martin .....	Gunnison
North, Lyman Warren .....	Charleston
Simmons, Willis A. ....	Charleston
Shilley, Heber G. ....	Paradise
Smith, Raymond James .....	Logan
Thomas, James .....	Logan
Walton, Donald Woodruff .....	Logan
Weidman, Joseph Lorenzo .....	Bear River City

FORESTRY.

Adams, Lawrence James .....	Monticello
Aldous, Edward Charles .....	Ogden
Bayer, Charles Julius .....	Ogden
Clemons, William Dean .....	Salt Lake City
Davis, Thomas Craddock .....	Spanish Fork
Herbert, Thomas M. ....	Salina
Hoge, Ezra J. ....	Logan
Johnson, Heber Riley .....	Holden
Lockheart, Clifton Oliver .....	Salt Lake City
Mace, William M. ....	Kanab
McGregor, Daniel Willis .....	Logan
McNamara, James Henry .....	Logan
Rice, Hopkin Ira .....	Providence
Stines, John Ernest .....	Logan
Thomas, Verne .....	Spanish Fork
Tuft, Bert .....	Monroe
Wood, Joseph Henry .....	Monticello

FARMERS' ROUNDUP.

Anderson, Peter .....	Moroni
Baker, Simon .....	Mendon
Ballard, H. W. ....	Benson
Baugh, Peter .....	Logan

Bocker, Christian .....	Brigham
Broby, Niels R. ....	Wellsville
Carlson, N. ....	Logan
Dowdle, S. C. ....	Logan
Dudley, B. S. ....	Logan
Eames, David G. ....	Preston
Frederick, J. J. ....	Providence
Fuhriman, G. J. ....	Providence
Gardner, James P. ....	Salt Lake City
Greaves, Oliver .....	Preston
Greaves, William C. ....	Preston
Hall, George H. ....	Huntsville
Hansen, George D. ....	Providence
Jensen, James .....	Bear River
Jones, B. H. ....	Dewey
King, John E. ....	Ferron
Knudson, W. O. ....	Brigham City
Larsen, Christian .....	Greenville
Larsen, John W. ....	Garland
Lloyd, Archie .....	Logan
Lloyd, John L. ....	Logan
Lloyd, Parley .....	Logan
Lyman, Fred. S. ....	Oak City
Mace, William Merkle .....	Kanab
Martineau, Nephi .....	King
Maughan, J. H. ....	Logan
Mortensen, Moroni .....	Bear River City
Murray, Parley .....	Wellsville
Nebeker, Hyrum .....	Laketown
Ogden, Junius F. ....	Richfield
Olsen, A. F. ....	Ephraim
Olyer, John .....	Garland
Pederson, Christian .....	Logan
Peterson, H. C. ....	Bear River
Peterson, James .....	Castle Dale
Peterson, L. P. ....	Logan
Reed, George H. ....	Clearfield
ShIPLEY, Heber G. ....	Paradise
Smith, Edward G. ....	Greenville
Sorenson, G. J. ....	Mendon
Steed, George H. ....	Hooper



Steed, Horace J. ....	Hooper
Trinnel, F. J. ....	Mendon
Wallerton, Brinton ....	Murray
Walton, Thad ....	Murray

## DOMESTIC SCIENCE.

### THIRD YEAR.

Andrews, Luella ....	Logan
Bennett, Nellie ....	Lago, Idaho
Bryner, Ada Luella ....	Price
Froiseth, Dorothy Strong ....	Salt Lake City
Jardine, Lenora ....	Logan
Laurenson, Lillie ....	Downey, Ida.
McIntire, Lena ....	Price
Nelson, Anna Eleda ....	Logan

### SECOND YEAR.

Adams, Venice ....	Logan
Alder, Dean Caine ....	Salt Lake City
Farrell, Gladys Adeline ....	Smithfield
Holden, Mittie ....	Logan
Hunsaker, Veda Laura ....	Honeyville
Izatt, Irene ....	Logan
Johnson, Myrtle Ivy ....	Logan
King, Annie J. ....	Castle Dale
Lee, Lucile ....	Hoytsville
Nelson, Anna G. ....	Logan
Quayle, Blanche ....	Dingle, Idaho
Raymond, Loila ....	Smithfield
Tuttle, Clara Elizabeth ....	Logan

### FIRST YEAR.

Barber, Wynona ....	Logan
Brunker, Lillie Marion ....	Willard
Homer, Ruth ....	Logan
Hunter, Myrtle ....	Logan
Lee, Winnifred ....	Hoytsville

Machin, Agnes .....	Logan
Nielson, Pearl C. ....	Logan
Pond, Irene .....	Lewiston
Wadman, Ruby .....	Logan

## COMMERCE.

## THIRD YEAR.

Brinkerhoff, Willard .....	Thurber
Bunderson, Hervin .....	Logan
Cahoon, George .....	Deseret
Froiseth, Robert Strong .....	Salt Lake City
Fryer, Charles .....	Salt Lake City
Laurenson, Frank William .....	Downey, Idaho
Lewis, Clair .....	Logan
Monson, Alfred Peter .....	Pleasant Grove
Montrose, Edna .....	Logan
Pace, Vern Willard .....	Loa
Pope, Frank A. ....	Vernal
Rogers, Lemuel Van .....	Logan
Secrist, Jesse Avern .....	Logan
Smith, William Leroy .....	Logan
Waters, Raymond .....	Logan
Webb, Joseph Eugene .....	Richmond

## SECOND YEAR.

Albrethsen, Adelia .....	Logan
Anderson, Elbert .....	Ogden
Borgeson, Lizzie Olivia .....	Santaquin
Costley, Richard Sheridan .....	Ogden
Cowley, Israel Abner .....	Venice
Crookston, Newell James .....	Greenville
Fuller, Lyda Elizabeth .....	Eden
Greenhalgh Violet Maurine .....	Logan
Hayball, Edith .....	Logan
Horsley, Leroy Cyril .....	Soda Springs, Idaho
Janson, Gilbert L. ....	Gunnison
Madsen, Vera .....	Logan
Merrill, Albert Eugene .....	Smithfield
Montrose, John Leslie .....	Logan

Munro, Mamie .....	Logan
Nelson, Mamie Cornelia .....	Logan
Nelson, Orene .....	Logan
Oldroyd, Lorin Todd .....	Glenwood
Peterson, Canute .....	Logan
Peterson, Clara .....	Logan
Robinson, John C. ....	Lyman, Idaho
Shaw, Roy Thomas .....	Paradise
Tarbet, Florence .....	Logan
Walters, Sarah .....	Logan

FIRST YEAR.

Anderson, Elveda Luella .....	Logan
Anderson, Lawrence .....	Ogden
Bahen, John .....	Logan
Barber, Walter Farrell .....	Logan
Bennett, Gerold .....	Deseret
Doutre, William .....	Sandy
Duncan, Phyllis .....	Roy
Fjeldsted, Eva .....	Smithfield
Frodsham, Mary .....	Rockland, Idaho
Hansen, Albert Levi .....	Idaho Falls, Idaho
Hardman, Pierce .....	Mendon
Hunsaker, Oscar .....	Honeyville
Jensen, Joseph .....	Logan
Johnson, John .....	Spanish Fork
Keaton, George Daniel .....	Logan
Kelley, Conrad Andrew .....	Logan
Larsen, May .....	Mendon
Laurenson, Edward Joseph .....	Logan
Lundahl, Emma .....	Logan
McKenzie, Mary Jane .....	Logan
Miller, Henry W. ....	Newton
Morgan, Willis .....	Collinston
Morris, Edward .....	Logan
Nelson, Conrad .....	Honeyville
Nelson, Lewis .....	Greenville
Palmer, Alfred A. ....	Logan
Peterson, Pearl .....	Richmond
Redford, Lou Lloyd .....	Logan
Rees, Ruth .....	Brigham City

Richins, Charles Parley .....	Logan
Rigby, Moses W. ....	Newton
Rose, Wallace .....	Logan
Russell, Daniel Lawrence .....	Mill Creek
Shaw, George L. ....	Liberty
Spencer, Charles Caldwell .....	Randolph
Stoddard, Archie .....	Logan

## WINTER COURSE.

Adams, Lawrence .....	Layton
Brown, Joseph .....	Garland
Fonnesbeck, James M. ....	Logan
Hart, Franklin .....	Raymond, Idaho
Jeppesen, Emil .....	Geneva
James, William T. ....	Paradise
Jensen, Ernest .....	Garland
Lundberg, Samuel .....	Logan
North, Lyman Warren .....	Charleston
Seedwell, J. L. ....	Idaho Falls, Idaho
Stringfellow, J. R. ....	Salt Lake City

## DOMESTIC ARTS.

## THIRD YEAR.

Crookston, Lucile .....	Greenville
Forgeon, Emily .....	Logan
Greenhalgh, Cora Elma .....	Logan
Hale, Viola Mary .....	Logan
Jones, Rachel .....	Logan

## SECOND YEAR.

Adams, Katie .....	Layton
Chidester, Mina .....	Richfield
Cole, Zina R. ....	Willard
Greenhalgh, Eurilla .....	Logan
Hayball, Lucile .....	Logan
Hunsaker, Jennie Maude .....	Honeyville
Miles, Dina .....	Smithfield
Morrell, Della .....	Logan

Nebeker, Lottie .....	Logan
Nyman, Teenie .....	Greenville
Richards, Carrie .....	Fielding
Robinson, Lenora .....	Richmond
Von Nordeck, Grace .....	Gunnison
Wheadon, Bessie .....	Coalville

FIRST YEAR.

Alvord, Eva .....	Logan
Christiansen, Randa .....	Centerfield
Cowley, May .....	Venice
Earl, Gertrude .....	Fielding
Earl, Jane .....	Garland
Edwards, Mae .....	Logan
Frederick, Aurelia .....	Providence
Frederick, Maurine .....	Providence
Haigh, Mary Alice .....	Murray
Harper, Arminta .....	Honeyville
Hofheins, Flossie Lenora .....	Gunnison
Holden, Mittie .....	Logan
Holmgren, Andrea .....	Bear River City
Horne, Florence .....	Richfield
Johnson, Otilia .....	College Ward
Kearl, Eva Jane .....	Smithfield
Kloepfer, Elizabeth .....	Logan
Knowlton, Chloe .....	Farmington
Korupkat, Tirzah .....	Logan
Korupkat, Winnifred .....	Logan
Larsen, Zina .....	Greenville
Lundberg, Mary .....	Logan
Meissner, Ellen .....	Logan
Nelson, Jennie .....	Greenville
Smith, Anna Dorothy .....	Logan
Stephenson, Martha Lavern .....	Holden
Taylor, Lora .....	Logan
Turpin, Effie Ellen .....	Murray
Wilson, Annie .....	Fielding

WINTER COURSE.

Adams, Nettie .....	Logan
Norr, Alvira .....	Logan



## MECHANIC ARTS.

## FOURTH YEAR.

Alder, Byron .....	Manti
Aldous, Sidney Edgar .....	Huntsville
Olsen, Joseph William .....	Crescent

## THIRD YEAR.

Ivie, Jacob William .....	Loa
Laurenson, Charles .....	Downey, Idaho
Pack, Ulysses .....	Kamas
Steed, James Thomas .....	Deweyville
Webb, Heber Jarvis .....	St. George
Welling, Truman Leroy .....	Fielding

## SECOND YEAR.

Barber, Herbert Raymond .....	Logan
Booth, George H. ....	Stockton
Brinkerhoff, George C. ....	Thurber
Cahoon, John .....	Deseret
Christiansen, Archie L. ....	Fountain Green
Frew, Stanley .....	Preston, Ida.
Gorton, Ralph .....	Soda Springs, Ida.
Gorton, Rees .....	Soda Springs, Ida.
Hansen, Leonard .....	American Fork
Rudy, Orson .....	Salt Lake City
Sneddon, James Yates .....	Logan
Treloar, Joseph .....	Robinson
Yates, Ford .....	Logan

## FIRST YEAR.

Anhder, Earl .....	Hyrum
Barrett, John Vernon .....	Logan
Brandt, Ira Clayton .....	Salina
Cahoon, Arthur .....	Deseret
Cantwell, Milo .....	Smithfield
Cedarlund, Harold .....	Logan
Clark, Walter .....	Liberty
Cook, Hyrum Vaterlaus .....	Garden City
Doutre, Steven .....	Sandy

Fisher, Asael .....	Meadow
Fuller, Clyde R. ....	Eden
Gleason, Herbert Lester .....	Kaysville
Halgren, Rene Charles .....	Logan
Harris, Thomas Andrew .....	Ogden
Haws, Vaughan .....	Logan
Hofheins, Leland Theodore .....	Gunnison
Jensen, Jacob C. ....	Murray.
Johnson, Abia E. ....	Colonia Diaz, Mexico
Johnson, Bruce .....	Holden
Johnson, Owen .....	Logan
Kallstrom, Herbert .....	Logan
Kimball, Quince Lavon .....	Smithfield
Lewis, Fred .....	Treasureton, Ida.
Linford, Preston .....	Panguitch
Low, Leo Osborn .....	Smithfield
McFarland, Archie John .....	West Weber
Moore, Edwin Ward .....	Hooper
Otte, Joseph E. ....	Logan
Passey, Parley Clifton .....	Garland
Peterson, Antone L. ....	Logan
Peterson, Paul .....	Logan
Petty, Edgar .....	Deseret
Prince, George L. ....	Harmony
Rogerson, William V.....	West Weber
Singleton, Morris .....	Ferron
Smith, Albert Thomas .....	Wanship
Smith, Donald Edward .....	Logan
Stender, Julius F. H. ....	Logan
Stephenson, Fred .....	Holden
Tarbet, Lee .....	Logan
Thomson, George Asa .....	Smithfield
Walters, Alexander Herron .....	Tooele
Webb, Irvin .....	Deseret
Wennergren, Emil .....	Newton
Woodbury, Orrin Nelson .....	St. George

WINTER COURSE.

Anderson, Edwin .....	Liberty
Anderson, C. L. ....	Bear River City
Barney, J. Newton .....	Panguitch

Beck, Asa .....	Spanish Fork
Christopherson, Alfred .....	Hyrum
Decker, Frank .....	Sanford, Colo.
Gray, James .....	Randolph
Hansen, Chris. ....	Bear River City
Holmes, Robert .....	Liberty
Jorgenson, W. H. ....	Fountain Green
Knighton, Henry E. ....	Gunnison
McCulloch, George .....	Logan
McKinnon, Ernest .....	Randolph
Matson, O. F. ....	Mt. Pleasant
Mickelson, John .....	Logan
Neuberger, Alexander .....	Logan
Olsen, Carlos .....	Brigham City
Shipp, Bard .....	Logan
Summer, Arthur .....	Avon
Smith, Frederick .....	Randolph
Smith Leal .....	Greenville
Spencer, Alvin .....	Riverton
Starley, James M. ....	Fillmore
Taylor, Llewellyn .....	Logan
Wood, Charles Warren .....	Huntsville
Wilhelm, Louis .....	Greenville

## COLLEGE PREPARATORY.

### SECOND YEAR.

Adair, Ira .....	Orderville
Carter, Ezra .....	Logan
Gill, Jesse .....	Logan
Jones, Amos Peter .....	Logan
Jonsson, Elmer .....	Logan
McAlister, Ward .....	Logan
Manning, Joseph Walter .....	Farmington
Minear, Virgil L. ....	Salt Lake City
Murdock, Lincoln Stanley .....	Beaver
Nebeker, Frank Knowlton .....	Logan
Peterson, Ray .....	Preston, Ida.
Seebeck, Heber Clifford .....	Twin Falls, Ida.

Steed, Gerold Miller .....	Farmington
Webb, Ruby .....	Deseret
Wyatt, Ralph A. ....	Wellsville

FIRST YEAR.

Cahoon, Ray P. ....	Murray
Crawford, Blythe .....	Corinne
Hansen, James .....	Cove
Harris, Herbert .....	Beaver
Lynes, Thomas Erroll .....	Logan
Mattson, Victor .....	Meadowville
McGregor, Charles .....	Logan
Morgan, Samuel .....	Logan
Newbold, Metta .....	Logan
Pond, Leon .....	Lewiston
Preston, Verne Monroe .....	Logan
Rich, Walker Smith .....	Blackfoot, Ida.
Rose, Guy .....	Logan
Stoops, Robert Cochran .....	Logan
Williams, Norville* .....	Milford
Wood, Clark .....	Holden

OPTIONALS.

Adams, Grace (D. S.) .....	Layton
Allred, Mrs. Harriet .....	Lehi
Alder, Mrs. Jennie (D. S.) .....	Manti
Ames, Luella (M.) .....	Logan
Anderson, Gwen (D. S.) .....	Salt Lake City
Ballard, Elvaretta (D. S.) .....	Benson
Ballard, Henry William (A.) .....	Benson
Blair, Virginia (D. S.) .....	Salt Lake City
Boam, William Thomas (A.) .....	Murray
Brandt, Durrell (G. S.) .....	Salina
Brossard, Fred (G. S.) .....	Logan
Carlson, Bessie (D. S.) .....	Greenville
Eccles, Jesse (M.) .....	Logan
Emeis, Mrs. Bretta (M.) .....	Logan

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\*Deceased.

Eskelson, Mrs. Laura Hatch (D. S.) .....	Woods Cross
Fonnesbeck, Lydia (M.) .....	Logan
Ford, Jesse Berry (A.) .....	Kanarra
Hammond, Alta (D. S.) .....	Millville
Herbert, Mabel (G. S.) .....	Salina
Heward, Nephi Parshall (A.) .....	Cannonville
Hopkins, Sybille (M.) .....	Logan
Jaskey, W. N. (M. A.) .....	Logan
Jensen, Wilmer Christian (A.) .....	Huntsville
Johnson, Myrtle (D. S.) .....	College Ward
Jonsson, Reuben (M.) .....	Logan
McChrystal, Jason (M. A.) .....	Salt Lake City
Mathisen, Sophie E. (D. S.) .....	Logan
Maughan, Armenia (D. A.) .....	Logan
Maughan, Laura (D. S.) .....	Wellsville
Mickelson, Nellie (M.) .....	Logan
Nebeker, Vilate (D. S.) .....	Logan
Nelson, Harriet (C.) .....	Logan
Nyman, Della (D. S.) .....	Greenville
Peterson, C. (M. A.) .....	Logan
Peterson, Geneva (G. S.) .....	Logan
Peterson, Netta (D. S.) .....	Logan
Speierman, Marie (C.) .....	Logan
Webb, Mrs. Sarah (G. S.)* .....	Deseret
Woolf, Ruby (D. S.) .....	Logan
Wood, Alonzo (M.) .....	Mendon

## SUMMER SCHOOL.

Anderson, Ida .....	Logan
Armstrong, Lucy Isabella .....	Logan
Atkinson, Rose .....	Clarkston
Ball, Mrs. Mildred .....	Logan
Barnard, Nellie .....	Brigham
Barrows, Harry Percy .....	Ogden
Bickmore, Margaret .....	Paradise
Bjarnason, Loftor .....	Logan
Boden, Nettie .....	Dayton

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\*Deceased.



Bradbury, Vena .....	Coveville
Brasher, Amelia .....	Beaver
Brasher, Leasil .....	Huntington
Breitenbucher, Hermina .....	Logan
Brown, Myrtle .....	Logan
Bybee, Emily, Marie .....	Lewiston
Bybee, Maud .....	Lewiston
Carroll, Ernest .....	Orderville
Chambers, Margaret .....	Ogden
Clark, Ezra John .....	Paradise
Coburn, Ivy .....	Wellsville
Cole, Lettie .....	Logan
Cox, Ella .....	Manti
Cragun, Pearl .....	Logan
Crowther, Etta .....	Elwood
Daines, Franklin David .....	Logan
Danielson, Rose Hirst .....	Paradise
Dunn, Charles Welch .....	College Ward
Dunn, Oscar L. ....	Lewiston
Farrell, Lorraine .....	Logan
Gassman, Anna .....	Newton
Goodwin, Edna .....	Logan
Griffin, Elberta .....	Fairview
Harding, George D. ....	Logan
Hardman, Cora .....	Mendon
Harris, Frank Stewart .....	Logan
Hendricks, Nellie W. ....	Logan
Hill, Bessie .....	Wellsville
Hill, George Richard .....	Springville
Hillyard, Inez .....	Smithfield
Hovey, Laurretta .....	Millville
Hovey, Roy .....	Millville
Jensen, Mabel .....	Bear River City
Jensen, Mary Baker .....	Mendon
Jones, Hilda .....	Logan
Jorgensen, Stella .....	Benson
Kemp, Sarah .....	Lewiston
Kewley, Annie .....	Logan
King, Priscilla .....	Logan
Knowlton, Viola .....	Farmington
Liljenquist, Katie .....	Hyrum

Lillywhite, William M. ....	Draper
Lloyd, Mattie ....	Logan
Lloyd, Orson ....	Logan
Martineau, Susie ....	Benson
Maughan, Harriet ....	Logan
Maycock, Mrs. Rena Baker ....	Salt Lake City
McAllister, Carrie ....	Logan
McCracken, Sadie ....	Smithfield
Miles, Jennie ....	Paradise
Monroe, Florence ....	Logan
Munk, Elizabeth ....	Logan
Noble, Maggie ....	Smithfield
Norton, Elven Jensen ....	Logan
Oldham, Delia ....	Paradise
Olsen, Emily ....	Paradise
Olsen, Hilda ....	Hyrum
Olsen, Wilford W. ....	Logan
Olsten, Sidonia ....	Manti
Parkinson, Elva ....	Hyrum
Perry, Vaughn ....	Logan
Ralph, Clara ....	Logan
Redford, Mary ....	Logan
Redford, Nora ....	Logan
Rice, Eva ....	Garland
Ridges, Wilford Owen ....	Ogden
Roundy, Isabella ....	Benson
Sandberg, Olga ....	Cornish
Sasser, Nora ....	Garland
Schmitt, Catherine ....	Eureka
Seal, Lima ....	Petersboro
Shaw, Minnie ....	Paradise
Shipley, Elizabeth ....	Paradise
Shipley, William C. ....	Paradise
Skidmore, Rozina ....	Richmond
Smith, Gertrude ....	Logan
Smith, Willis Alvin ....	Lewiston
Sonne, Nora ....	Logan
Sorenson, Lettie C. ....	Hyrum
Stevens, Leroy Alfred ....	Logan
Stewart, Robert ....	Logan
Stoops, Josephine ....	Logan

Thomson, Eunice .....	Elwood
Turpin, George M. ....	Murray
Tuttle, Clara .....	Logan
Wade, Nettie .....	Ogden
Watkins, Ethel .....	Vernal
Williamson, Eva .....	Wellsville
Williamson, Ruby .....	Wellsville
Wilson, Esther .....	Hyrum

### SUMMARY BY COURSES.

Agriculture .....	302
Domestic Science and Arts .....	129
Commerce .....	111
General Science .....	60
Mechanic Arts .....	100
Music .....	17
College Preparatory .....	31
Summer School .....	100
	<hr/>
	850
Names Repeated .....	18
	<hr/>
Total Registration .....	832

## SUMMARY BY YEARS.

Graduates .....	2	
Seniors .....	22	
Juniors .....	32	
Sophomores .....	43	
Freshmen .....	66	
Fourth Year (with rank of Sophomore) .....	3	
Third Year (with rank of Freshman) .....	33	
Specials .....	50	
<hr/>		
Total of College Grade.....		251
Third Year .....	5	
Second Year .....	114	
First Year .....	209	
Winter Course—		
Agriculture .....	25	
Forestry .....	17	
Commerce .....	11	
Domestic Arts .....	2	
Mechanic Arts .....	26	
Round-up .....	49	
<hr/>		
		130
Optionals .....	41	
<hr/>		
Total High School and Preparatory .....		499
Summer School .....		100
<hr/>		
		850
Less names repeated .....		18
<hr/>		
Total registration .....		832

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